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Wavelengths and Energy Levels of the Second Spectrum of Cerium (Ce II)

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The second spectrum of cerium (Ce II) has been compiled in the wavelength region between 2500 Å and 24 000 Å. Of the 11 000 lines in the list, about 7500 are now classified as transitions between 192 odd levels and 288 even levels. The odd levels arise from 5 configurations ($4f5d^2$, $4f5d6s$, $4f6s^2$, $4f^26p$, and $4f^3$) and the even levels from 7 configurations ($4f^26s$, $4f^25d$, $4f5d6p$, $4f6s6p$, $5d^3$, $5d^26s$, and $5d6s^2$). The known levels extend up to only 52 000 cm^{-1} although the ionization potential is known to be 35 000 cm^{-1} higher.

Key words: Cerium; Ce II; energy levels; spectrum; wavelengths.

1. Introduction

About forty years ago George R. Harrison and Walter E. Albertson [1934][1] at the new M.I.T. Spectroscopy Laboratory photographed the spectrum of the cerium arc from 2500 to 5000 Å at a dispersion of 0.4 Å/mm. The precision of the wavelengths they measured was adequate to permit Albertson and Harrison [1937] to establish an array of 31 low odd ($4f5d^2$ and $4f5d6s$) levels and 51 high even ($4f5d6p$ and $4f^25d$) levels which accounted for 584 of their lines. These levels were established simply on the basis of intervals in their list of wave numbers that repeated significantly more than the statistically expected number of times.

These levels were confirmed and interpreted to some extent by Harrison, Albertson, and Hosford [1941] with the aid of Zeeman patterns photographed from Bitter's large solenoidal magnet operating at fields up to 9.6 teslas (96 000 gauss). They reported Zeeman patterns for 427 classified lines in the range 2600 to 7000 Å. They extended the earlier energy system to 75 low odd and 162 high even levels and found a second system, which they were unable to connect with the first, consisting of 39 low even ($4f^26s$ and $4f^25d$) levels and 40 high odd ($4f^26p$ and $4f^3$) levels. They provided g-values for 280 of these 316 levels.

The outbreak of war effectively put a stop to any further work on Ce II at M.I.T. They were left with a list of about 7000 lines of which 3600 were classified. In 1949, after spending many months assigning designations to the levels, Albertson sent his analysis to Dr. Meggers at NBS. It is of interest here to quote remarks from his accompanying letter, dated August 6, 1949, concerning the structure of Ce II.

> "The large number of levels in Ce II require many electron configurations to explain their origin. It has long been recognized that in the general vicinity of cerium (on the periodic table) that the $4f$, $5d$, and $6s$ electrons are all of near the same energy and in competition with each other. This competition is quite marked in lanthanum and cerium. As you recall, you and Russell found all combinations of the $6s$, $6p$, $5d$ and $4f$ electrons taken two at a time, in La II. Not only that but you found almost all the terms arising from them. The same holds true (but to a considerably lesser extent regarding terms) in the three electron spectrum of Ce II.
>
> The possible combinations of the $6s$, $6p$, $5d$, and $4f$ electrons, taken three at a time are: (**1**) $4f^3$, $4f^25d$, $4f^26s$, $4f^26p$; (**2**) $4f5d^2$, $4f6s^2$, $4f6p^2$, $4f5d6s$; (**3**) $4f5d6p$, $4f6s6p$, $5d^3$, $5d^26s$; (**4**) $5d^26p$, $5d6s6p$; (**5**) $5d6s^2$; (**6**) $5d6p^2$, $6s^26p$, $6s6p^2$, $6p^3$.
>
> Of the 19 theoretical electron configurations, those from the groups (4) and (**6**) would be expected to be too high to be found from the energy levels under study. $5d6s^2$ would be expected to be difficult to find since it would give rise to only two levels, both of which would be subject to considerable perturbation by neighboring levels of same J-value. Of the 12 electron configurations comprising the groupings (**1**), (**2**), and (**3**) above, positive evidence for the existence of all in the structure of Ce II has been found, with the single exception of $4f6p^2$. In addition, the levels of $5d6s^2$ have been assigned, but they are uncertain, so no strong claims for $5d6s^2$ are made."

In 1955 he sent his line list to NBS and a copy was forwarded to G. Racah at the Hebrew University of Jerusalem. Racah [1955] had recently found that the low $4f5d^2$ and $4f5d6s$ levels lay 3854 cm^{-1} below the low $4f^26s$ and $4f^25d$ levels, by using the infrared line list of Kiess et al. [1921], and he was applying his methods of parametric analysis to the interpretation of Ce II and other rare-earth spectra. In addition Racah had by 1957 found 14 new levels below 14000 cm^{-1} in the low odd configurations $4f5d^2+4f5d6s+4f6s^2$.

[1] Literature references at the end of the paper.

Some years before Racah's death in 1965, work on the analysis of Ce II had been taken over by one of Racah's students, Zipora Goldschmidt, who published in 1968 a comprehensive thesis entitled "Theoretical Investigation of Rare-Earth Spectra." Her treatment of Ce II is particularly thorough, with detailed calculations for all seven of the known even configurations and four of the five known odd configurations. She identified the $4f6s^2$ configuration and changed many of Albertson's assignments on the basis of her diagonalizations and least squares adjustments. Predictions were made for all the missing levels of the eleven configurations. These were most helpful in guiding the later searches at NBS. Furthermore she continued studying the experimental data, finding 50 good new levels, rejecting about 20 of the levels found at M.I.T. and correcting the J-values of several.

In 1970 it was decided to prepare a new line list for Ce II based on new observations, search for the missing levels of the eleven configurations predicted by Goldschmidt, and publish a complete line list with classifications. Such a list for Ce II had never yet been published.

2. Wavelengths

Over the past fifty years at least nine extensive lists of cerium spectra have been prepared. They are listed in table 1. Three of them have not been published. The first unpublished list, that of Albertson [1939], was prepared from observations with 10 m gratings at plate factors of 0.4 Å/mm using cerium arcs. It covers the range 2500 to 5000 Å fairly completely, but does not separate Ce I from Ce II. Later, to provide needed wavelengths in the infrared for the NBS Intensity Tables, Corliss [1955] observed the region 6700 to 11 000 Å with cerium arcs and a 6.3 m Wadsworth spectrograph at a plate factor of 5 Å/mm.

TABLE 1. *Line lists available for cerium spectra*

Reference	Date	Wavelength range Å	No. of lines	Ref. symbol
Klein	[1918]	2500– 4600	2500	PK
Kiess et al.	[1921]	5500– 9000	1700	CK
King	[1928]	3000– 7000	1360	AK
Harrison	[1939]	2100– 8800	5755	MT
Albertson	[1939]	2500– 7300	7000	WA
Gatterer & Junkes	[1945]	2200– 7400	3200	GJ
Corliss	[1955]	6700–11300	1260	CC
Meggers, Corliss & Scribner.	[1961]	2460– 8900	1700	MC
Martin, Corliss & Blanc	[1965]	3290–10300	9000	MB

The third unpublished list is a very extensive set of observations prepared in connection with the analysis of Ce I undertaken by William C. Martin [1963] and [1971] at the National Bureau of Standards. An entirely new description of cerium spectra (Ce I and Ce II) was prepared by Martin, Corliss, and Marie Blanc, for the region 3300 to 10 000 Å using high-voltage a.c. arcs, hollow-cathodes and electrodeless lamps described by Corliss, Bozman, and Westfall [1953]. These observations were made at plate factors between 1 and 5 Å/mm. Comparison of relative intensities from the several light sources permitted the definite assignment of most lines to either Ce I or Ce II. Later more accurate wavelengths were measured at NBS by Marie Blanc for lines between 3800 and 7100 Å on spectrograms of electrodeless discharges made for us by J. Conway and E. F. Worden, Jr. in the eighth through fifteenth orders of a 3 m Czerny-Turner spectrograph at the University of California. These exposures favored Ce I but permitted improvement in most of the wavelengths for Ce II. All of these new measurements were used to assemble two lists, one of about 25 000 lines of Ce I and one of Ce II consisting of about 9000 wavelengths in the range 3290 to 10 300 Å (the last entry in table 1). In view of the high density of Ce I lines at wavelengths longer than 4500 Å, the possibility of blending with Ce II lines in some cases is very real. Lines likely to be blended are marked "b" in the line list.

To prepare a working list of Ce II lines that would be as complete and accurate as practicable, all of the Ce II lines from the nine available lists (shown in table 1) were punched on cards and sorted by wavelength. To evaluate the relative accuracy of the lists all possible transitions between the known even and odd levels were calculated for the range 2000 to 12 000 Å and compared with the measured values. It soon became evident that the unpublished list of Albertson [1939] was the best available from 2500 to 3290 Å, that of Martin, Corliss, and Blanc [1965] from 3290 to 10 300 Å and that of Corliss [1955] from about 8900 to 11 300 Å. A master list of 11 883 lines between 2500 and 11 000 Å was assembled, mainly from those three lists but with a few lines from the other lists given in table 1. This became the working list with which the analysis was to be extended.

A description of the general physical features of the spectrum would not be out of place here. In a light source operating at about 6000 K the cerium is over 99 percent ionized. A rather featureless spectrum starts near 2500 Å with a line density about one line/Å, increasing through 3 lines/Å at 3000 Å to a narrow peak of 8 or 10 lines/Å between 3700 Å and 4050 Å. The line density of Ce II then gradually trails off through 3 lines/Å at 4400 Å, one line/Å at 5000 Å to about one line every 5 Å at 8000 Å. A very dense background of faint Ce I lines appears at 4500 Å and begins to dominate the spectrum above 4800 Å.

The strongest lines of Ce II lie between 3800 and 4200 Å. Nearly all of the strong lines belong to one of three transition arrays. For example, of the 28 lines with intensity 1000 or more in table 4, 11 lines are from fds–fdp, 10 from f^2s–f^2p and 7 from fd^2–fdp. The strongest line is at 4186.596 Å with an intensity 2500 on our scale. The transition is $4f^26s\ {}^4H_{6\,1/2}$ – $4f^26p\ {}^4I^\circ_{7\,1/2}$.

3. Establishment of Energy Levels

The computer processing of the line list and the searches for new energy levels were carried out on the NBS Univac 1108 using the programs called "Combo," written by Jack Tech. The search portion of the program is based on the principle of adding or subtracting the wavenumber of every line to every level and noting sums or differences which repeat within a given tolerance more than a given number of times. (This procedure was proposed and programmed for an earlier NBS computer by G. Racah during a visit here in 1958.)

Starting with the known low odd levels which include the $4f5d^2$ ground configuration, improved values were determined for the low even levels by using the new values for wavelengths longer than 5600 Å. This improved the accuracy of Racah's connection between the two systems. The combinations between the low odd and high even levels (4600 lines) and between the low even and high odd levels (900 lines) were found and removed from the line list. A number of the "known" levels were found to be unreal on the basis of precision and number of combinations. With the 6400 remaining unclassified lines, searches were carried out for the undiscovered levels predicted in the four odd and seven even configurations calculated by Goldschmidt (1968).

The energy levels of $4f^3$, which had not been calculated by Goldschmidt, were predicted by comparison with $4f^3$ found in Pr III by Sugar (1963). Compressing the scale of intervals between Pr III levels by 0.65 and adding 38 000 cm^{-1}, the height of the lowest $4f^3$ term in Ce II, resulted in successful identification of all the known f^3 levels below 50 000 cm^{-1}. The ^4S, predicted to lie at 45 700 cm^{-1}, remains undiscovered, as well as those terms above 50 000 cm^{-1}. The $4f^3$ configuration has since been calculated by Mrs. Goldschmidt. Amongst the other odd configurations, numerous additions were made to $4f5d^2$ and $4f^26p$.

Nearly all of the 47 even levels found at this time belong to $4f^25d$ and lie between 10 000 and 28 000 cm^{-1}. A large fraction of the lines contributing to their discovery have wavelengths longer than 5000 Å where the older line lists were inadequate.

In 1971, after I had terminated this program of searches, Mrs. Z. Goldschmidt (during a sabbatical year at the NBS Spectroscopy Section) encouraged me to resume the searches for undiscovered terms, particularly those based on $4f^2(^1I_6)$. With the help of new diagonalizations and least squares calculations and improved precision of energy level values, we found the correct levels for terms of the configurations $4f^2(^1I_6)6s$ and $4f^2(^1I_6)6p$, most of which had previously been assigned to spurious levels. About a dozen more $4f^25d$ levels were also found at this time.

The odd term $4f5d^2\ ^2K°$ was found by means of four strong combinations with the two $4f5d6p\ ^2I$ terms, which were among the strongest of the remaining unclassified lines. We also found the $4f^3\ ^2K°$. Then with the help of these $^2K°$ terms and the old $4f^3\ ^4I°_{7\frac{1}{2}}$ we found $4f^25d\ ^2L$, the term with the highest L-value identified in the spectrum.

Since the present paper represents the culmination of six successive efforts to find energy levels in Ce II, it is appropriate to summarize the contribution of each to the total number of levels now regarded as real.

Symbol	Reference	Odd	Even	Total
A	Albertson et al. [1937]	31	50	81
H	Harrison et al. [1941]	79	136	215
R	Racah [1957, unpublished]	14	.....	14
G	Goldschmidt [1968]	19	31	50
C	Corliss [1971, unpublished]	29	47	76
B	Corliss & Goldschmidt [1972, unpubl.]	20	24	44
	Totals	192	288	480

About 1600 lines were classified by the new levels (C and B).

4. Results

Observational spectroscopists are interested in the classification of lines that appear in laboratory or stellar spectra that they have observed. In such cases the spectrum of a particular ion is usually only partially developed, which means that information is required for only stronger lines of the spectrum. This need is generally satisfied by a moderately complete description and analysis. In the present spectrum, there are 666 lines in our line list which are of intensity 100 or greater. Only one of these lines has not been classified. Less than 1 percent of the 1690 Ce II lines strong enough to be listed in the NBS Tables of Spectral-Line Intensities remain unclassified.

In most spectra there are usually some terms which make only a few combinations and in cases where these combinations are faint it may be difficult to discover missing levels without an extremely complete and precise line list. In the case of Ce II there are 232 odd levels predicted for the five known odd configurations $4f5d^2$, $4f5d6s$, $4f6s^2$, $4f^26p$, and $4f^3$. Of these 192 have been found. There are 305 even levels predicted for the seven known even configurations $4f^26s$, $4f^25d$, $4f5d6p$, $4f6s6p$, $5d^3$, $5d^26s$, and $5d6s^2$. Of these 288 have been found.

The 40 levels missing from the five known odd configurations fall into two categories; either they have J-values of 7/2 or less, or they are predicted to lie above 53 000 cm^{-1}. In either case, transitions would tend to faintness. All but four of the missing levels belong to $4f^26p$ or $4f^3$ and are predicted to lie above 40 000 cm^{-1}.

All 17 missing even levels have J-values of 1/2 (9 levels), 3/2 (6 levels) or 5/2 (2 levels).

The work reported in this paper is concerned exclusively with preparing a line list, establishing energy levels and classifying spectrum lines; the theoretical predictions and interpretations have been carried out by Goldschmidt, who will publish them separately.

A. Energy Levels

The energy levels of Ce II will eventually appear in three publications: (1) in a volume of the general com-

pilation "Atomic Energy Levels" covering the rare-earth spectra now in preparation by W. C. Martin and colleagues in the Spectroscopy Section of NBS, (2) in Goldschmidt's paper and (3) here. It is often helpful to the user for tables of material as complex as this to be made available in various formats. In "AEL", levels of both parities are arranged in a single table by energy value with subgroupings by terms when the mixing of terms is small. In Goldschmidt's thesis the odd levels were grouped by terms and the even levels by J-value. The term tables in the present paper serve as an index for detailed information about the levels listed numerically with each classified line. Here convenience requires tabulation in numerical order.

The odd levels are listed in table 2 and the even levels in table 3. The configuration and term symbol of the largest component in the calculated eigenvector of the level are listed in the first two columns. These are followed by the J-value, observed level value, and observed g-value in the next three columns. The g-values are from Harrison et al. [1941]. The percentage contributed by the leading term to the composition of the level is given in the sixth column followed in columns 7 and 8 by the percentage and designation of the term which makes the second largest contribution to the composition of the level. The composition is from Goldschmidt [1972].

In some cases, more than one level of a given J may have the first percentage from the same term. Note, for example, that both the ground level of Ce II and the level at 1874 cm^{-1} have the same leading component, $4f(^2F°)5d^2(^3F)\,^4H°_{3\frac{1}{2}}$, and that the ground level also has a larger component of $4f(^2F°)5d^2(^3F)\,^2G°_{3\frac{1}{2}}$, than does any other level. For this reason the leading component cannot always serve as a designation. Very few of the levels of Ce II have more than 99 percent purity, but if the second contribution is less than one percent, it is omitted. If the second component is from a different configuration, it is so indicated. The last columns show the approximate number of combinations made by each level and the symbol (as listed at the end of sec. 3) for the discoverer of the level.

The levels of the $4f^26p$ configuration were calculated in a J_{1j} scheme made obvious by the notation for components from this configuration in table 1.

The f^3 configuration has more than one term of a particular type (defined by the values of S and L) for certain SL combinations, and Goldschmidt's calculations used Racah's group-theoretical separations of such repeating terms. A component from such a term of $4f^3$ in table 1 has an ordinal number following the usual term symbol. The correspondence between this ordinal number and the appropriate set of group-theoretical numbers for the term is given by Nielson and Koster [1963].

B. Spectrum lines

The table of observed Ce II lines (table 4), consists of 11 000 lines in the wavelength range from 2500 to 24 000 Å. About 7500 of these lines are classified as transitions between the levels listed in tables 2 and 3. The wavelengths below 9000 Å are given to 3 decimal places; those above, to 2. The visually estimated intensities are on a scale which is adjusted below 4800 Å to be about ten times the scale used in Meggers, Corliss, and Scribner [1961]. The strongest line has an intensity of 2500. Above 4800 Å the scale grows somewhat larger. Lines beyond 11 000 Å are all taken from the list of Verges, Corliss, and Martin [1972]. Lines likely to be blended with Ce I lines are indicated with "b" following the intensity.

TABLE 2. *Odd energy levels of* Ce II

First component							Second component		
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f(^2F°)5d^2(^3F)$	$^4H°$	$3\frac{1}{2}$	0.000	0.794	48	35	$(^2F°)(^3F)\ ^2G°$	72	*A*
$4f(^2F°)5d^2(^3F)$	$^4I°$	$4\frac{1}{2}$	987.611	0.948	30	24	$(^2F°)(^3F)\ ^2G°$	64	*H*
$4f(^2F°)5d^2(^3F)$	$^4I°$	$4\frac{1}{2}$	1410.304	0.856	49	22	$(^2F°)(^3F)\ ^4H°$	66	*A*
$4f(^2F°)5d^2(^3F)$	$^4H°$	$3\frac{1}{2}$	1873.934	0.806	43	18	$(^2F°)(^3F)\ ^2G°$	80	*A*
$4f(^2F°)5d^2(^3F)$	$^2S°$	$\frac{1}{2}$	2140.492	0.985	26	23	$(^2F°)(^1D)\ ^2P°$	26	*H*
$4f5d(^1G°)6s$	$^2G°$	$4\frac{1}{2}$	2382.246	1.039	33	18	$4f(^2F°)5d^2(^3F)\ ^4H°$	79	*A*
$4f(^2F°)5d^2(^3F)$	$^4I°$	$5\frac{1}{2}$	2563.233	0.968	94	2	$(^2F°)(^1D)\ ^2H°$	35	*A*
$4f(^2F°)5d^2(^3F)$	$^4H°$	$4\frac{1}{2}$	2581.257	1.023	35	21	$(^2F°)(^3F)\ ^2G°$	70	*A*
$4f5d(^3F°)6s$	$^4F°$	$1\frac{1}{2}$	2595.644	0.516	72	21	$(^1D°)\ ^2D°$	68	*A*
$4f5d(^3F°)6s$	$^2F°$	$2\frac{1}{2}$	2634.666	0.957	26	21	$4f(^2F°)5d^2(^1D)\ ^2F°$	81	*A*
$4f5d(^1G°)6s$	$^2G°$	$3\frac{1}{2}$	2641.559	0.829	44	29	$(^3H°)\ ^4H°$	84	*A*
$4f(^2F°)5d^2(^3F)$	$^4H°$	$5\frac{1}{2}$	2879.695	1.123	92	2	$(^2F°)(^1D)\ ^2H°$	41	*A*

TABLE 2. *Odd energy levels of* Ce II—Continued

First component							Second component		
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f5d(^3F^\circ)6s$	$^4F^\circ$	2½	3363.427	0.995	43	18	$4f(^2F^\circ)5d^2(^3F)$ $^2F^\circ$	94	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^2S^\circ$	½	3508.470	1.262	52	27	$(^2F^\circ)(^3F)$ $^4D^\circ$	32	*H*
$4f5d(^1G^\circ)6s$	$^2G^\circ$	4½	3593.882	0.988	26	25	$4f(^2F^\circ)5d^2(^1D)$ $^2H^\circ$	76	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^2F^\circ$	3½	3703.594	1.085	20	16	$(^2F^\circ)(^3F)$ $^2G^\circ$	89	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4D^\circ$	1½	3745.475	1.240	58	16	$(^2F^\circ)(^3P)$ $^4D^\circ$	47	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4I^\circ$	6½	3793.634	1.128	68	24	$(^2F^\circ)(^3F)$ $^4H^\circ$	25	*H*
$4f5d(^3H^\circ)6s$	$^4H^\circ$	3½	3995.460	0.879	51	18	$(^3F^\circ)$ $^4F^\circ$	85	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	1½	4201.893	0.528	54	15	$(^2F^\circ)(^1D)$ $^2D^\circ$	54	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4H^\circ$	6½	4203.934	1.189	69	29	$(^2F^\circ)(^3F)$ $^4I^\circ$	21	*H*
$4f5d(^3G^\circ)6s$	$^2G^\circ$	3½	4266.397	0.964	27	26	$(^3G^\circ)$ $^4G^\circ$	88	*A*
$4f5d(^3G^\circ)6s$	$^4G^\circ$	2½	4322.708	0.766	30	28	$4f(^2F^\circ)5d^2(^3F)$ $^4G^\circ$	82	*A*
$4f5d(^3F^\circ)6s$	$^4F^\circ$	3½	4459.872	1.134	57	10	$4f(^2F^\circ)5d^2(^1D)$ $^2G^\circ$	92	*A*
$4f5d(^3G^\circ)6s$	$^4G^\circ$	2½	4511.257	0.731	63	10	$(^3F^\circ)$ $^4F^\circ$	83	*A*
$4f5d(^3H^\circ)6s$	$^4H^\circ$	4½	4523.033	0.978	84	4	$4f(^3F^\circ)5d^2(^1D)$ $^2H^\circ$	71	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4D^\circ$	2½	4737.373	1.021	41	33	$(^2F^\circ)(^3F)$ $^4G^\circ$	75	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	1½	4844.644	0.699	29	25	$4f5d(^1D^\circ)6s$ $^2D^\circ$	56	*A*
$4f5d(^3H^\circ)6s$	$^4H^\circ$	5½	4910.963	1.095	32	26	$(^3H^\circ)$ $^2H^\circ$	47	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	2½	5010.870	1.038	80	7	$(^2F^\circ)(^3P)$ $^4F^\circ$	76	*A*
$4f5d(^1D^\circ)6s$	$^2D^\circ$	2½	5118.806	1.152	43	17	$4f(^2F^\circ)5d^2(^3F)$ $^4D^\circ$	86	*A*
$4f(^2F^\circ)5d^2(^1D)$	$^2P^\circ$	½	5283.029	0.566	34	31	$(^2F^\circ)(^3F)$ $^4D^\circ$	36	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4G^\circ$	3½	5437.422	0.999	54	23	$4f5d(^3G^\circ)6s$ $^4G^\circ$	76	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4I^\circ$	7½	5455.845	1.196	99			6	*H*
$4f5d(^3H^\circ)6s$	$^4H^\circ$	5½	5651.357	1.085	49	15	$4f(^2F^\circ)5d^2(^3F)$ $^2I^\circ$	50	*H*
$4f5d(^3F^\circ)6s$	$^4F^\circ$	4½	5675.763	1.241	71	16	$(^3G^\circ)$ $^4G^\circ$	74	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4G^\circ$	3½	5716.216	1.009	37	34	$4f5d(^3G^\circ)6s$ $^4G^\circ$	78	*A*
$4f5d(^3G^\circ)6s$	$^4G^\circ$	4½	5819.113	1.189	26	21	$4f(^2F^\circ)5d^2(^1D)$ $^2G^\circ$	75	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^2P^\circ$	1½	5924.204	1.241	26	25	$(^2F^\circ)(^1D)$ $^2P^\circ$	59	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	3½	5942.798	1.145	26	22	$(^2F^\circ)(^3F)$ $^4D^\circ$	81	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	3½	5964.896	1.332	45	29	$(^2F^\circ)(^3F)$ $^4D^\circ$	74	*H*
$4f(^2F^\circ)5d^2(^1G)$	$^2I^\circ$	5½	5969.007	0.954	32	30	$(^2F^\circ)(^3F)$ $^2I^\circ$	46	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4G^\circ$	4½	6389.942	1.154	66	19	$4f5d(^3G^\circ)6s$ $^4G^\circ$	67	*A*
$4f5d(^3F^\circ)6s$	$^2F^\circ$	2½	6517.619	0.954	14	14	$(^3D^\circ)$ $^2D^\circ$	72	*H*
$4f5d(^3D^\circ)6s$	$^2D^\circ$	1½	6521.332	0.924	28	27	$(^3D^\circ)$ $^4D^\circ$	66	*H*
$4f5d(^3F^\circ)6s$	$^2F^\circ$	2½	6549.908		20	15	$(^1D^\circ)$ $^2D^\circ$	82	*R*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	4½	6638.258	1.215	27	26	$4f5d(^3G^\circ)6s$ $^4G^\circ$	62	*A*
$4f5d(^3H^\circ)6s$	$^4H^\circ$	6½	6913.392	1.217	95	2	$4f(^2F^\circ)5d^2(^3F)$ $^2I^\circ$	17	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4F^\circ$	4½	7059.072	1.222	53	9	$(^2F^\circ)(^3F)$ $^4G^\circ$	70	*H*
$4f5d(^3D^\circ)6s$	$^4D^\circ$	½	7061.838		95	2	$(^1P^\circ)$ $^2P^\circ$	35	*G*

TABLE 2. *Odd energy levels of* Ce II—Continued

First component							Second component		
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f(^2F^\circ)5d^2(^3P)$	$^4G^\circ$	2½	7202.529	1.106	91	3	$4f5d(^3F^\circ)6s$ $^2F^\circ$	68	*H*
$4f5d(^3G^\circ)6s$	$^4G^\circ$	5½	7233.627	1.266	80	14	$4f(^2F^\circ)5d^2(^3F)$ $^4G^\circ$	35	*H*
$4f5d(^3F^\circ)6s$	$^2F^\circ$	3½	7259.075	1.140	39	18	$4f(^2F^\circ)5d^2(^3F)$ $^2F^\circ$	83	*A*
$4f(^2F^\circ)5d^2(^3F)$	$^4P^\circ$	1½	7278.922		85	6	$(^2F^\circ)(^3F)$ $^2P^\circ$	46	*R*
$4f(^2F^\circ)5d^2(^3F)$	$^2I^\circ$	6½	7293.938	1.100	48	37	$(^2F^\circ)(^1G)$ $^2I^\circ$	24	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4P^\circ$	½	7522.458		84	12	$(^2F^\circ)(^3F)$ $^2S^\circ$	29	*G*
$4f(^2F^\circ)5d^2(^3F)$	$^4G^\circ$	5½	7522.622	1.248	78	16	$4f5d(^3G^\circ)6s$ $^4G^\circ$	36	*H*
$4f(^2F^\circ)5d^2(^1G)$	$^2H^\circ$	4½	7713.089	0.950	28	26	$(^2F^\circ)(^3F)$ $^2H^\circ$	65	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4P^\circ$	2½	7746.185		77	7	$4f5d(^3D^\circ)6s$ $^2D^\circ$	73	*R*
$4f5d(^3D^\circ)6s$	$^4D^\circ$	1½	7818.147	1.099	67	14	$(^1D^\circ)$ $^2D^\circ$	60	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^4G^\circ$	3½	7878.328	1.195	83	5	$4f5d(^3G^\circ)6s$ $^2G^\circ$	71	*H*
$4f(^2F^\circ)5d^2(^3F)$	$^4S^\circ$	1½	8169.698		66	14	$(^2F^\circ)(^1D)$ $^2P^\circ$	48	*G*
$4f5d(^3D^\circ)6s$	$^4D^\circ$	2½	8175.863	1.271	75	7	$(^1F^\circ)$ $^2F^\circ$	73	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^2D^\circ$	2½	8280.946	1.189	48	7	$(^2F^\circ)(^3F)$ $^4D^\circ$	73	*A*
$4f5d(^3D^\circ)6s$	$^4D^\circ$	3½	8402.668	1.343	69	13	$(^1F^\circ)$ $^2F^\circ$	73	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^2D^\circ$	1½	8702.444		50	11	$(^2F^\circ)(^3F)$ $^2D^\circ$	47	*R*
$4f(^2F^\circ)5d^2(^3P)$	$^4G^\circ$	4½	8804.224	1.160	69	9	$4f5d(^3G^\circ)6s$ $^2G^\circ$	50	*H*
$4f5d(^3H^\circ)6s$	$^2H^\circ$	5½	8927.514	1.071	36	31	$4f(^2F^\circ)5d^2(^3F)$ $^2H^\circ$	45	*H*
$4f(^2F^\circ)5d^2(^1G)$	$^2G^\circ$	3½	9198.326		64	16	$(^2F^\circ)(^3P)$ $^2G^\circ$	63	*G*
$4f(^2F^\circ)5d^2(^3P)$	$^4D^\circ$	½	9269.826		41	35	$(^2F^\circ)(^3F)$ $^2P^\circ$	27	*G*
$4f5d(^3P^\circ)6s$	$^4P^\circ$	½	9491.493		97	1	$(^1P^\circ)$ $^2P^\circ$	26	*G*
$4f5d(^3P^\circ)6s$	$^4P^\circ$	1½	9634.186	1.690	87	4	$(^1P^\circ)$ $^2P^\circ$	57	*H*
$4f(^2F^\circ)5d^2(^1G)$	$^2G^\circ$	4½	9723.335	1.348	29	18	$(^2F^\circ)(^3P)$ $^4G^\circ$	60	*H*
$4f(^2F^\circ)6s^2$	$^2F^\circ$	2½	9778.986		73	13	$4f(^2F^\circ)5d^2(^1S)$ $^2F^\circ$	76	*R*
$4f(^2F^\circ)5d^2(^3P)$	$^4G^\circ$	5½	10035.711		93	2	$4f5d(^3H^\circ)6s$ $^2H^\circ$	31	*C*
$4f(^2F^\circ)5d^2(^3F)$	$^2P^\circ$	1½	10088.640		23	17	$(^2F^\circ)(^3P)$ $^4D^\circ$	50	*R*
$4f5d(^1F^\circ)6s$	$^2F^\circ$	2½	10114.883	0.938	54	8	$4f(^2F^\circ)5d^2(^1D)$ $^2F^\circ$	70	*H*
$4f5d(^1F^\circ)6s$	$^2F^\circ$	3½	10274.971	1.195	52	22	$(^3D^\circ)$ $^4D^\circ$	61	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^4D^\circ$	1½	10454.272		31	19	$(^2F^\circ)(^3P)$ $^4F^\circ$	42	*R*
$4f5d(^3P^\circ)6s$	$^4P^\circ$	2½	10641.442	1.526	86	3	$4f(^2F^\circ)5d^2(^3P)$ $^4D^\circ$	62	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^4D^\circ$	½	10684.441		36	29	$(^2F^\circ)(^3F)$ $^2P^\circ$	22	*C*
$4f(^2F^\circ)5d^2(^3P)$	$^4D^\circ$	2½	10798.555	0.971	37	27	$(^2F^\circ)(^3P)$ $^4F^\circ$	54	*H*
$4f(^2F^\circ)5d^2(^1G)$	$^2H^\circ$	4½	10924.876		44	22	$(^2F^\circ)(^1G)$ $^2G^\circ$	42	*R*
$4f(^2F^\circ)5d^2(^3P)$	$^4F^\circ$	1½	11007.799		58	12	$(^2F^\circ)(^3P)$ $^4D^\circ$	40	*G*
$4f(^2F^\circ)5d^2(^3P)$	$^4F^\circ$	2½	11325.781		55	19	$(^2F^\circ)(^3P)$ $^4D^\circ$	54	*R*
$4f(^2F^\circ)5d^2(^3P)$	$^4F^\circ$	3½	11340.598	1.123	38	12	$4f5d(^3G^\circ)6s$ $^2G^\circ$	63	*H*
$4f(^2F^\circ)5d^2(^3P)$	$^4D^\circ$	3½	11387.731		60	17	$(^2F^\circ)(^3F)$ $^4D^\circ$	46	*R*
$4f(^2F^\circ)5d^2(^1G)$	$^2H^\circ$	5½	11742.245	1.081	51	20	$4f5d(^1H^\circ)6s$ $^2H^\circ$	32	*H*
$4f5d(^3G^\circ)6s$	$^2G^\circ$	3½	11949.189	1.029	22	19	$4f(^2F^\circ)5d^2(^1D)$ $^2G^\circ$	67	*H*

TABLE 2. *Odd energy levels of* Ce II—continued

First component							Second component		
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f(^2F°)5d^2(^3F)$	$^2D°$	$2^1/_2$	12057.107		47	17	$(^2F°)(^1G)\ ^2F°$	48	*R*
$4f(^2F°)6s^2$	$^2F°$	$3^1/_2$	12260.088	1.168	42	35	$4f(^2F°)5d^2(^3P)\ ^4F°$	55	*H*
$4f(^2F°)5d^2(^1G)$	$^2K°$	$6^1/_2$	12326.417		97	2	$(^2F°)(^3F)\ ^2I°$	11	*B*
$4f(^2F°)5d^2(^3F)$	$^2H°$	$4^1/_2$	12365.806	0.921	46	23	$4f5d(^1H°)6s\ ^2H°$	47	*H*
$4f(^2F°)5d^2(^3F)$	$^2D°$	$1^1/_2$	12466.430		59	18	$(^2F°)(^3P)\ ^2D°$	35	*C*
$4f(^2F°)5d^2(^3F)$	$^2H°$	$5^1/_2$	12751.782		33	23	$4f5d(^1H°)6s\ ^2H°$	28	*C*
$4f(^2F°)5d^2(^3P)$	$^4F°$	$4^1/_2$	12762.641	1.275	65	9	$4f5d(^3G°)6s\ ^2G°$	46	*H*
$4f(^2F°)5d^2(^1G)$	$^2F°$	$2^1/_2$	13012.095		44	14	$(^2F°)(^3F)\ ^2D°$	43	*G*
$4f(^2F°)5d^2(^1G)$	$^2F°$	$3^1/_2$	13515.853		73	9	$(^2F°)(^3F)\ ^2F°$	35	*R*
$4f(^2F°)5d^2(^3P)$	$^4F°$	$4^1/_2$	13659.329		23	23	$4f5d(^3G°)6s\ ^2G°$	39	*C*
$4f5d(^3D°)6s$	$^2D°$	$1^1/_2$	13758.670		45	33	$4f(^2F°)5d^2(^1D)\ ^2D°$	37	*R*
$4f5d(^3P°)6s$	$^2P°$	$1^1/_2$	13784.834		37	36	$(^1P°)\ ^2P°$	39	*R*
$4f5d(^3P°)6s$	$^2P°$	$^1/_2$	14315.932		62	18	$(^1P°)\ ^2P°$	17	*B*
$4f(^2F°)5d^2(^1G)$	$^2K°$	$7^1/_2$	14404.40		99			4	*B*
$4f(^2F°)5d^2(^1D)$	$^2F°$	$2^1/_2$	14481.930		29	14	$(^2F°)(^1G)\ ^2F°$	40	*G*
$4f(^2F°)5d^2(^1G)$	$^2I°$	$5^1/_2$	14963.100		41	39	$(^2F°)(^3F)\ ^2I°$	25	*G*
$4f(^2F°)5d^2(^1G)$	$^2I°$	$6^1/_2$	15517.772		56	42	$(^2F°)(^3F)\ ^2I°$	13	*C*
$4f5d(^3D°)6s$	$^2D°$	$2^1/_2$	15565.420		26	20	$4f(^2F°)5d^2(^1G)\ ^2D°$	36	*C*
$4f(^2F°)5d^2(^1D)$	$^2F°$	$3^1/_2$	16159.536		42	14	$4f5d(^3F°)6s\ ^2F°$	37	*C*
$4f5d(^1H\ °)6s$	$^2H°$	$4^1/_2$	16192.466		62	20	$4f(^2F°)5d^2(^1D)\ ^2H°$	25	*C*
$4f5d(^1H°)6s$	$^2H°$	$5^1/_2$	17171.245		45	29	$4f(^2F°)5d^2(^1D)\ ^2H°$	19	*C*
$4f(^2F°)5d^2(^3P)$	$^2G°$	$3^1/_2$	17300.310		41	18	$(^2F°)(^1D)\ ^2G°$	24	*C*
$4f(^2F°)5d^2(^3P)$	$^2G°$	$4^1/_2$	17475.023		38	28	$(^2F°)(^1D)\ ^2G°$	19	*C*
$4f5d(^1P°)6s$	$^2P°$	$^1/_2$	17851.80		74	12	$(^1D°)\ ^2P°$	9	*B*
$4f(^2F°)5d^2(^1G)$	$^2D°$	$2^1/_2$	18147.005		55	17	$(^2F°)(^1D)\ ^2D°$	19	*B*
$4f(^2F°)5d^2(^3P)$	$^2F°$	$2^1/_2$	19136.024		54	15	$(^2F°)(^1S)\ ^2F°$	21	*C*
$4f5d(^1P°)6s$	$^2P°$	$1^1/_2$	19138.534		42	21	$(^1G°)\ ^2P°$	12	*C*
$4f(^2F°)5d^2(^3P)$	$^2F°$	$3^1/_2$	19920.813		62	11	$(^2F°)(^3F)\ ^2F°$	15	*C*
$4f(^2F°)5d^2(^1G)$	$^2P°$	$1^1/_2$	19946.568		59	13	$4f5d(^1P°)6s\ ^2P°$	13	*C*
$4f^2(^3H_4)6p_{1/2}$	$(4,^1/_2)$	$4^1/_2$	25766.355	0.799	95	4	$(^1G_4)6p_{1/2}$	20	*H*
$4f^2(^3H_4)6p_{1/2}$	$(4,^1/_2)$	$3^1/_2$	26268.203	0.712	75	19	$(^3H_4)6p_{11/2}$	19	*H*
$4f^2(^3H_5)6p_{1/2}$	$(5,^1/_2)$	$5^1/_2$	27378.515	1.005	87	11	$(^3H_4)6p_{11/2}$	21	*H*
$4f^2(^3H_4)6p_{11/2}$	$(4,1^1/_2)$	$4^1/_2$	27432.782	0.941	62	31	$(^3H_5)6p_{1/2}$	21	*H*
$4f^2(^3H_5)6p_{1/2}$	$(5,^1/_2)$	$4^1/_2$	27975.619	0.933	51	34	$(^3H_4)6p_{11/2}$	28	*H*
$4f^2(^3H_4)6p_{11/2}$	$(4,1^1/_2)$	$5^1/_2$	28327.071	1.036	64	26	$(^3H_5)6p_{11/2}$	21	*H*
$4f^2(^3H_4)6p_{11/2}$	$(4,1^1/_2)$	$3^1/_2$	28349.582	0.900	71	15	$(^3H_4)6p_{1/2}$	23	*H*
$4f^2(^3H_4)6p_{11/2}$	$(4,1^1/_2)$	$2^1/_2$	28396.150	0.594	65	27	$(^3F_2)6p_{1/2}$	17	*H*
$4f^2(^3H_6)6p_{1/2}$	$(6,^1/_2)$	$6^1/_2$	29043.854	1.130	70	27	$(^3H_5)6p_{11/2}$	17	*H*

TABLE 2 *Odd energy levels of* Ce II—Continued

First component						Second component			
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f^2(^3H_6)6p_{1/2}$	$(6,1/2)$	$5^1/_2$	29263.338	1.107	62	14	$(^3H_5)6p_{11/2}$	24	*H*
$4f^2(^3H_5)6p_{11/2}$	$(5,1^1/_2)$	$6^1/_2$	29591.873	1.158	64	19	$(^3H_6)6p_{11/2}$	15	*H*
$4f^2(^3H_5)6p_{11/2}$	$(5,1^1/_2)$	$4^1/_2$	29735.413	1.112	78	11	$(^3H_5)6p_{1/2}$	24	*H*
$4f^2(^3H_5)6p_{11/2}$	$(5,1^1/_2)$	$5^1/_2$	29750.547	1.019	58	22	$(^3H_6)6p_{1/2}$	21	*H*
$4f^2(^3H_5)6p\ _{11/2}$	$(5,1^1/_2)$	$3^1/_2$	29892.677	0.940	46	45	$(^3F_3)6p_{1/2}$	27	*H*
$4f^2(^3F_2)6p_{1/2}$	$(2,1/2)$	$2^1/_2$	29948.914	0.612	65	29	$(^3H_4)6p_{11/2}$	17	*H*
$4f^2(^3F_2)6p_{1/2}$	$(2,1/2)$	$1^1/_2$	30120.406	0.677	95	2	$(^1D_2)6p_{1/2}$	14	*H*
$4f^2(^3F_4)6p_{1/2}$	$(4,1/2)$	$4^1/_2$	30669.702	1.110	53	27	$(^1G_4)6p_{1/2}$	30	*H*
$4f^2(^3H_6)6p_{11/2}$	$(6,1^1/_2)$	$7^1/_2$	30846.582	1.205	100			7	*H*
$4f^2(^3F_3)6p_{1/2}$	$(3,1/2)$	$2^1/_2$	31024.076		95	1	$(^3F_3)6p_{11/2}$	25	*G*
$4f^2(^3H_5)6p_{11/2}$	$(5,1^1/_2)$	$3^1/_2$	31130.983	0.975	37	33	$(^3F_3)6p_{1/2}$	20	*H*
$4f^2(^3H_6)6p_{11/2}$	$(6,1^1/_2)$	$5^1/_2$	31151.534	1.210	74	13	$(^3F_4)6p_{11/2}$	21	*H*
$4f^2(^3H_6)6p_{11/2}$	$(6,1^1/_2)$	$6^1/_2$	31340.393	1.110	77	12	$(^3H_6)6p_{1/2}$	18	*H*
$4f^2(^3F_4)6p_{1/2}$	$(4,1/2)$	$3^1/_2$	31344.828		52	34	$(^1G_4)6p_{1/2}$	25	*G*
$4f^2(^3F_2)6p_{11/2}$	$(2,1^1/_2)$	$^1/_2$	31613.833		95	2	$(^1D_2)6p_{11/2}$	6	*C*
$4f^2(^3F_2)6p_{11/2}$	$(2,1^1/_2)$	$1^1/_2$	31747.243	0.860	95	2	$(^1D_2)6p_{11/2}$	15	*H*
$4f^2(^3F_2)6p_{11/2}$	$(2,1^1/_2)$	$2^1/_2$	31966.748	1.015	87	8	$(^3F_3)6p_{11/2}$	21	*H*
$4f^2(^3F_2)6p_{11/2}$	$(2,1^1/_2)$	$3^1/_2$	32235.239	1.111	52	15	$(^3F_3)6p_{1/2}$	29	*H*
$4f^2(^3H_6)6p_{11/2}$	$(6,1^1/_2)$	$4^1/_2$	32372.621	1.104	48	33	$(^3F_3)6p_{11/2}$	27	*H*
$4f^2(^3F_3)6p_{11/2}$	$(3,1^1/_2)$	$4^1/_2$	32616.019		47	28	$(^1G_4)6p_{1/2}$	24	*C*
$4f^2(^3F_3)6p_{11/2}$	$(3,1^1/_2)$	$1^1/_2$	32826.668		95	1	$4f5d(^3D°)6s\ ^2D°$	12	*C*
$4f^2(^3F_4)6p_{11/2}$	$(4,1^1/_2)$	$5^1/_2$	32864.278		52	29	$(^1G_4)6p_{11/2}$	21	*C*
$4f^2(^3F_3)6p_{11/2}$	$(3,1^1/_2)$	$2^1/_2$	32885.367	1.102	47	28	$(^3F_4)6p_{11/2}$	21	*H*
$4f^2(^3F_3)6p_{11/2}$	$(3,1^1/_2)$	$3^1/_2$	32989.218	1.10	46	22	$(^1G_4)6p_{1/2}$	31	*H*
$4f^2(^3F_4)6p_{11/2}$	$(4,1^1/_2)$	$4^1/_2$	33040.353	1.106	36	34	$(^1G_4)6p_{11/2}$	24	*H*
$4f^2(^3F_4)6p_{11/2}$	$(4,1^1/_2)$	$3^1/_2$	33111.163	1.086	29	27	$(^3F_3)6p_{11/2}$	21	*H*
$4f^2(^1G_4)6p_{1/2}$	$(4,1/2)$	$3^1/_2$	33535.636	0.966	31	23	$(^3F_4)6p_{1/2}$	27	*H*
$4f^2(^3F_3)6p_{11/2}$	$(3,1^1/_2)$	$2^1/_2$	33594.152		41	34	$(^3F_4)6p_{11/2}$	22	*C*
$4f^2(^3F_4)6p_{1/2}$	$(4,1/2)$	$4^1/_2$	33908.193	1.11	30	21	$(^1G_4)6p_{11/2}$	28	*H*
$4f^2(^1G_4)6p_{11/2}$	$(4,1^1/_2)$	$5^1/_2$	34861.526		63	34	$(^3F_4)6p_{11/2}$	22	*C*
$4f^2(^3F_4)6p_{11/2}$	$(4,1^1/_2)$	$4^1/_2$	35026.944	1.142	50	41	$(^1G_4)6p_{11/2}$	19	*H*
$4f^2(^1G_4)6p_{11/2}$	$(4,1^1/_2)$	$2^1/_2$	35298.190		59	32	$(^3F_4)6p_{11/2}$	14	*C*
$4f^2(^3F_4)6p_{11/2}$	$(4,1^1/_2)$	$3^1/_2$	35625.700	0.923	48	46	$(^1G_4)6p_{11/2}$	20	*H*
$4f^3$	$^4I°$	$4^1/_2$	38194.728	0.720	97	2	$^2H°2$	16	*H*
$4f^2(^1D_2)6p_{1/2}$	$(2,1/2)$	$1^1/_2$	38661.520		82	7	$(^3P_2)6p_{1/2}$	10	*B*
$4f^2(^1D_2)6p_{1/2}$	$(2,1/2)$	$2^1/_2$	38835.734		83	7	$(^3P_2)6p_{1/2}$	19	*B*
$4f^3$	$^4I°$	$5^1/_2$	39079.298	0.964	99	1	$^2H°2$	12	*H*
$4f^3$	$^4I°$	$6^1/_2$	40039.524	1.104	99			12	*H*

TABLE 2. *Odd energy levels of* Ce II – Continued

First component						Second component		n, ref.	
Configuration	Term	J	Level	g	%				
			cm^{-1}						
$4f^2(^1D_2)6p_{1\,1/2}$	$(2,1^1/2)$	$3^1/2$	40475.925		88	7	$(^3P_2)6p_{1\,1/2}$	21	*B*
$4f^2(^1D_2)6p_{1\,1/2}$	$(2,1^1/2)$	$1^1/2$	40720.122		79	7	$(^3P_2)6p_{1\,1/2}$	13	*B*
$4f^3$	$^4I°$	$7^1/2$	41058.614	1.197	99	1	$^2K°$	9	*H*
$4f^2(^1D_2)6p_{1\,1/2}$	$(2,1^1/2)$	$2^1/2$	41100.932		89	5	$(^3P_2)6p_{1\,1/2}$	20	*B*
$4f^2(^3P_1)6p_{1/2}$	$(1,^1/2)$	$1^1/2$	42533.459		42	22	$(^3P_2)6p_{1/2}$	6	*B*
$4f^2(^1I_6)6p_{1/2}$	$(6,^1/2)$	$6^1/2$	42712.810		79	21	$(^1I_6)6p_{1\,1/2}$	13	*B*
$4f^2(^1I_6)6p_{1/2}$	$(6,^1/2)$	$5^1/2$	42729.447		69	30	$(^1I_6)6p_{1\,1/2}$	18	*G*
$4f^2(^3P_0)6p_{1\,1/2}$	$(0,1^1/2)$	$1^1/2$	44423.575		69	24	$(^3P_2)6p_{1/2}$	13	*B*
$4f^2(^1I_6)6p_{1\,1/2}$	$(6,1^1/2)$	$6^1/2$	44637.548		79	20	$(^1I_6)6p_{1/2}$	10	*B*
$4f^3$	$^4F°$	$1^1/2$	44651.303		62	25	$4f^2(^3P_1)6p_{1\,1/2}$	13	*C*
$4f^2(^3P_2)6p_{1\,1/2}$	$(2,1^1/2)$	$3^1/2$	44893.939		92	7	$(^1D_2)6p_{1\,1/2}$	12	*B*
$4f^3$	$^2H°2$	$4^1/2$	44949.011		61	9	$^2H°1$	20	*G*
$4f^3$	$^4F°$	$2^1/2$	45130.529		97	2	$^2D°1$	19	*C*
$4f^2(^1I_6)6p_{1\,1/2}$	$(6,1^1/2)$	$7^1/2$	45443.86		99			5	*B*
$4f^3$	$^4F°$	$3^1/2$	45598.301		92	4	$^2G°1$	19	*G*
$4f^2(^1I_6)6p_{1\,1/2}$	$(6,1^1/2)$	$5^1/2$	45864.950		59	24	$(^1I_6)6p_{1/2}$	12	*B*
$4f^3$	$^4F°$	$4^1/2$	46162.692		77	9	$^2H°2$	20	*G*
$4f^3$	$^2H°2$	$5^1/2$	46588.131		66	10	$4f^2(^1I_6)6p_{1\,1/2}$	19	*G*
$4f^2(^1I_6)6p_{1\,1/2}$	$(6,1^1/2)$	$4^1/2$	46697.084		89	4	$4f^3\ ^2H°2$	13	*B*
$4f^3$	$^2G°1$	$3^1/2$	47430.184		35	31	$^4G°$	22	*C*
$4f^3$	$^4G°$	$2^1/2$	47459.894		98	1	$4f(^2F°)5d\,^2(^3P)\ ^4G°$	17	*C*
$4f^3$	$^2K°$	$6^1/2$	48045.10		98	1	$^2I°$	7	*B*
$4f^3$	$^4G°$	$3^1/2$	48330.79		67	18	$^2G°1$	25	*C*
$4f^3$	$^4G°$	$4^1/2$	48549.99		65	11	$^2G°1$	18	*G*
$4f^3$	$^2K°$	$7^1/2$	49087.88		94	4	$^2L°$	7	*B*
$4f^3$	$^2G°1$	$4^1/2$	49267.982		33	31	$^4G°$	18	*C*
$4f^3$	$^4G°$	$5^1/2$	49617.70		93	4	$^2H°1$	16	*G*

TABLE 3. *Even energy levels of* Ce II

First component						Second component		n, ref.	
Configuration	Term	J	Level	g	%				
			cm^{-1}						
$4f^2(^3H)6s$	^4H	$3^1/2$	3854.012	0.669	95	3	$(^1G)\ ^2G$	11	*H*
$4f^2(^3H)6s$	^4H	$4^1/2$	4165.550	0.949	55	40	$(^3H)\ ^2H$	24	*H*
$4f^2(^3H)6s$	^4H	$5^1/2$	5513.709	1.125	82	17	$(^3H)\ ^2H$	21	*H*
$4f^2(^3H)6s$	^2H	$4^1/2$	5616.739	0.934	56	42	$(^3H)\ ^4H$	22	*H*
$4f^2(^3H)6s$	^4H	$6^1/2$	6967.547	1.225	98	1	$4f5d(^3G°)6p\ ^4H$	12	*H*
$4f^2(^3H)5d$	^2H	$4^1/2$	7011.804	0.889	65	19	$(^3H)\ ^4I$	22	*H*
$4f^2(^3H)5d$	^4K	$5^1/2$	7092.265	0.803	83	7	$(^3H)\ ^2I$	18	*H*

TABLE 3. *Even energy levels of* Ce II—Continued

First component								
Configuration	Term	J	Level	g	%	Second component		n, ref.
			cm^{-1}					
$4f^2(^3H)6s$	^2H	$5^1/_2$	7341.007	1.089	81	17	$(^3H)\ ^4H$	20 *H*
$4f^2(^3F)6s$	^4F	$1^1/_2$	7454.951	0.407	95	2	$(^1D)\ ^2D$	10 *H*
$4f^2(^3F)6s$	^4F	$2^1/_2$	7722.285	0.986	68	27	$(^3F)\ ^2F$	18 *H*
$4f^2(^3H)5d$	^4I	$4^1/_2$	8131.217	0.751	78	11	$(^3H)\ ^2H$	19 *H*
$4f^2(^3H)5d$	^2H	$5^1/_2$	8278.054	0.957	56	14	$(^3F)\ ^2H$	20 *H*
$4f^2(^3H)5d$	^4K	$6^1/_2$	8423.672	0.980	96	2	$(^3H)\ ^2I$	8 *H*
$4f^2(^3H)5d$	^4G	$2^1/_2$	8448.641	0.633	49	30	$(^3F)\ ^4G$	12 *H*
$4f^2(^3F)6s$	^4F	$3^1/_2$	8531.678	1.213	89	4	$(^3F)\ ^2F$	21 *H*
$4f^2(^3F)6s$	^4F	$4^1/_2$	8774.064	1.247	61	34	$(^1G)\ ^2G$	19 *H*
$4f^2(^3F)6s$	^2F	$2^1/_2$	8789.380	0.905	69	28	$(^3F)\ ^4F$	20 *H*
$4f^2(^3H)5d$	^4I	$5^1/_2$	8896.729	0.961	92	4	$(^3H)\ ^2I$	16 *H*
$4f^2(^3F)6s$	^2F	$3^1/_2$	9053.629	1.026	54	41	$(^1G)\ ^2G$	25 *H*
$4f^2(^3H)5d$	^4G	$3^1/_2$	9316.912	0.992	54	32	$(^3F)\ ^4G$	22 *H*
$4f^2(^3H)5d$	^4H	$3^1/_2$	9725.733	0.694	63	25	$(^3F)\ ^4H$	19 *H*
$4f^2(^3H)5d$	^4K	$7^1/_2$	9771.956	1.090	100			6 *H*
$4f^2(^3H)5d$	^4I	$6^1/_2$	10058.226	1.105	97	2	$(^3H)\ ^2I$	15 *H*
$4f^2(^3H)5d$	^4G	$4^1/_2$	10314.162	1.04	55	34	$(^3F)\ ^4G$	24 *H*
$4f^2(^3H)5d$	^2I	$5^1/_2$	10646.070	0.951	46	22	$(^1G)\ ^2I$	22 *H*
$4f^2(^3H)5d$	^4H	$4^1/_2$	10703.305	0.969	62	27	$(^3F)\ ^4H$	19 *H*
$4f^2(^3H)5d$	^2F	$2^1/_2$	10820.486		34	26	$(^3F)\ ^2F$	19 *C*
$4f^2(^1G)6s$	^2G	$4^1/_2$	10869.541	1.193	60	36	$(^3F)\ ^4F$	18 *H*
$4f^2(^1G)6s$	^2G	$3^1/_2$	11015.579	1.016	49	39	$(^3F)\ ^2F$	18 *H*
$4f^2(^3H)5d$	^4K	$8^1/_2$	11165.796	1.187	100			3 *H*
$4f^2(^3H)5d$	^4I	$7^1/_2$	11309.972	1.193	98	1	$(^3H)\ ^2K$	6 *H*
$4f^2(^3H)5d$	^2I	$6^1/_2$	11454.701	1.101	48	27	$(^1G)\ ^2I$	18 *H*
$4f^2(^3H)5d$	^4G	$5^1/_2$	11458.353	1.235	48	35	$(^3F)\ ^4G$	17 *H*
$4f^2(^3H)5d$	^4H	$5^1/_2$	11759.467	1.124	64	28	$(^3F)\ ^4H$	22 *H*
$4f^2(^3F)5d$	^2F	$3^1/_2$	12097.276		38	32	$(^3H)\ ^2F$	26 *C*
$4f^2(^3F)5d$	^4H	$3^1/_2$	12456.746	0.691	63	28	$(^3H)\ ^4H$	20 *H*
$4f^2(^3H)5d$	^4F	$1^1/_2$	12704.634	0.467	68	17	$(^3F)\ ^4F$	9 *H*
$4f^2(^3H)5d$	^4H	$6^1/_2$	13027.758	1.210	59	22	$(^3F)\ ^4H$	12 *H*
$4f^2(^3F)5d$	^4H	$4^1/_2$	13117.922		36	21	$(^1G)\ ^2H$	29 *G*
$4f^2(^3H)5d$	^2G	$3^1/_2$	13217.976		45	11	$(^1G)\ ^2F$	23 *G*
$4f^2(^3F)5d$	^4P	$1^1/_2$	13256.701		60	16	$(^3F)\ ^2D$	11 *C*
$4f^2(^3H)5d$	^4F	$2^1/_2$	13268.218		51	12	$(^3F)\ ^4F$	17 *C*
$4f^2(^3F)5d$	^4P	$2^1/_2$	13436.858		47	13	$(^3F)\ ^2D$	17 *C*
$4f^2(^3F)5d$	^4P	$^1/_2$	13503.508		64	16	$(^3F)\ ^2P$	8 *B*
$4f^2(^3F)5d$	^4H	$4^1/_2$	13527.239	0.963	32	24	$(^1G)\ ^2H$	31 *H*

TABLE 3. *Even energy levels of* Ce II—Continued

First component									
Configuration	Term	J	Level	g	%	Second component		n, ref.	
			cm^{-1}						
$4f^2(^3F)5d$	^4G	$2^1/_2$	13675.722		54	25	$(^3H)\ ^4G$	20	*G*
$4f^2(^3F)5d$	^2D	$1^1/_2$	14049.761		34	14	$(^3F)\ ^2P$	11	*C*
$4f^2(^3H)5d$	^4F	$3^1/_2$	14097.689		40	17	$(^3F)\ ^4G$	17	*C*
$4f^2(^3F)5d$	^4G	$3^1/_2$	14252.178		30	20	$(^3H)\ ^4G$	24	*G*
$4f^2(^3F)5d$	^4H	$5^1/_2$	14276.298	1.114	59	27	$(^3H)\ ^4H$	30	*H*
$4f^2(^3H)5d$	^4F	$4^1/_2$	14387.112		33	16	$(^3H)\ ^2G$	27	*G*
$4f^2(^1G)5d$	^2H	$5^1/_2$	14625.503		44	16	$(^3H)\ ^4G$	22	*G*
$4f^2(^3F)5d$	^4D	$1^1/_2$	14727.540		35	27	$(^3F)\ ^2P$	14	*C*
$4f^2(^3F)5d$	^4F	$2^1/_2$	14739.761		24	19	$(^3H)\ ^2F$	20	*C*
$4f^2(^1G)5d$	^2G	$3^1/_2$	14827.623		27	12	$(^3H)\ ^2G$	27	*C*
$4f^2(^3F)5d$	^4G	$4^1/_2$	15134.048		41	18	$(^3H)\ ^4G$	30	*G*
$4f^2(^3F)5d$	^4F	$1^1/_2$	15235.579		49	19	$(^3H)\ ^4F$	15	*C*
$4f^2(^3F)5d$	^4H	$6^1/_2$	15281.602	1.204	61	27	$(^3H)\ ^4H$	20	*H*
$4f^2(^3F)5d$	^4F	$2^1/_2$	15434.699		29	22	$(^3F)\ ^2D$	16	*B*
$4f^2(^3F)5d$	^4D	$^1/_2$	15510.786		74	21	$(^3F)\ ^2P$	5	*B*
$4f^2(^3F)5d$	^4D	$2^1/_2$	15529.576		80	5	$(^1G)\ ^2D$	21	*C*
$4f^2(^3F)5d$	^4D	$1^1/_2$	15576.568		50	28	$(^3F)\ ^2P$	15	*C*
$4f^2(^3H)5d$	^2K	$6^1/_2$	15593.660		76	15	$(^1I)\ ^2K$	16	*G*
$4f^2(^3H)5d$	^2G	$4^1/_2$	15803.310		38	12	$(^3F)\ ^4G$	24	*B*
$4f^2(^3F)5d$	^4D	$3^1/_2$	15822.059		28	16	$(^1G)\ ^2G$	29	*G*
$4f^2(^3H)5d$	^4F	$4^1/_2$	15859.363		43	35	$(^1G)\ ^2G$	26	*G*
$4f^2(^1D)6s$	^2D	$2^1/_2$	16133.194		68	5	$(^3P)\ ^4P$	18	*C*
$4f^2(^3F)5d$	^4D	$3^1/_2$	16152.377		48	27	$(^3F)\ ^4F$	30	*G*
$4f^2(^1D)6s$	^2D	$1^1/_2$	16268.673		86	4	$(^3P)\ ^2P$	10	*B*
$4f^2(^1D)6s$	^2D	$2^1/_2$	16454.555		17	12	$4f^2(^3H)5d\ ^4F$	16	*C*
$4f^2(^3F)5d$	^4G	$5^1/_2$	16545.269		47	23	$(^3H)\ ^4G$	17	*C*
$4f^2(^3F)5d$	^4F	$3^1/_2$	17000.007		28	20	$(^3H)\ ^4F$	23	*C*
$4f^2(^3H)5d$	^2K	$7^1/_2$	17232.652		80	18	$(^1I)\ ^2K$	9	*C*
$4f^2(^3F)5d$	^4F	$4^1/_2$	17571.401		55	17	$(^1G)\ ^2G$	22	*C*
$4f^2(^1G)5d$	^2D	$2^1/_2$	17976.413		56	27	$(^3F)\ ^2D$	13	*C*
$4f^2(^3F)5d$	^2G	$3^1/_2$	18393.327		36	18	$(^1D)\ ^2G$	31	*C*
$4f^2(^1G)5d$	^2I	$5^1/_2$	18704.313		56	23	$(^3H)\ ^2I$	15	*C*
$4f^2(^3F)5d$	^2H	$4^1/_2$	19481.040		47	13	$(^1G)\ ^2H$	23	*C*
$4f^2(^1G)5d$	^2F	$2^1/_2$	19483.225		50	27	$(^3F)\ ^2F$	25	*C*
$4f^2(^1G)5d$	^2I	$6^1/_2$	19950.340		62	26	$(^3H)\ ^2I$	13	*C*
$4f^2(^3F)5d$	^2G	$4^1/_2$	19982.187		42	17	$(^1D)\ ^2G$	29	*C*
$4f^2(^3F)5d$	^2H	$5^1/_2$	20554.596		51	11	$(^1I)\ ^2H$	14	*C*
$4f^2(^3P)6s$	^4P	$2^1/_2$	20714.959		87	6	$(^1D)\ ^2D$	7	*B*
$4f^2(^1I)6s$	^2I	$5^1/_2$	20783.79		96	3	$4f5d(^1H^\circ)6p\ ^2I$	11	*B*

TABLE 3. *Even energy levels of* Ce II—Continued

First component						Second component		n, ref.	
Configuration	Term	J	Level	g	%				
			cm^{-1}						
$4f^2(^1I)6s$	^2I	$6^1/_2$	20881.327		97	3	$4f5d(^1H^\circ)6p\ ^2I$	5	*B*
$4f^2(^1G)5d$	^2F	$3^1/_2$	20940.839		33	26	$(^3F)\ ^2F$	27	*C*
$4f^2(^3P)6s$	^2P	$1^1/_2$	21373.623		66	12	$4f^2(^1D)6d\ ^2P$	9	*B*
$4f^2(^3P)5d$	^4F	$1^1/_2$	22290.320		30	17	$(^1D)\ ^2D$	7	*C*
$4f^2(^3P)5d$	^4F	$2^1/_2$	22576.170		32	19	$(^1D)\ ^2F$	16	*C*
$4f^2(^3P)5d$	^4F	$1^1/_2$	22903.974		34	21	$(^3P)\ ^4P$	14	*C*
$4f^2(^3P)5d$	^4P	$2^1/_2$	23200.331		45	15	$(^3P)\ ^4F$	15	*C*
$4f^2(^3P)5d$	^4F	$3^1/_2$	23267.351		41	16	$(^1D)\ ^2G$	24	*C*
$4f^2(^1D)5d$	^2D	$1^1/_2$	23508.880		34	29	$(^3P)\ ^4P$	11	*C*
$4f^2(^3P)5d$	^4F	$4^1/_2$	23640.563		33	29	$(^1D)\ ^2G$	23	*C*
$4f^2(^1D)5d$	^2F	$2^1/_2$	23782.988		40	28	$(^3P)\ ^4F$	19	*C*
$4f^2(^1D)5d$	^2G	$3^1/_2$	24153.466		34	18	$(^3P)\ ^4F$	27	*C*
$4f^2(^1D)5d$	^2D	$2^1/_2$	24500.756		43	21	$(^3P)\ ^4P$	20	*C*
$4f5d(^1G^\circ)6p$	^2H	$4^1/_2$	24663.053	0.933	34	25	$(^3H)\ ^2H$	25	*A*
$4f^2(^1D)5d$	^2F	$3^1/_2$	24819.334		43	18	$(^3P)\ ^4F$	27	*C*
$4f^2(^3P)5d$	^2P	$1^1/_2$	25099.482		43	13	$(^3P)\ ^4P$	9	*C*
$4f5d(^3F^\circ)6p$	^4G	$2^1/_2$	25359.686	0.761	42	23	$(^1D)\ ^2F$	17	*A*
$4f^2(^3P)5d$	^4F	$4^1/_2$	25361.674		45	28	$(^1D)\ ^2G$	26	*C*
$4f^2(^1I)5d$	^2I	$5^1/_2$	25492.251		92	3	$(^3H)\ ^2I$	16	*B*
$4f5d(^3F^\circ)6p$	^4F	$1^1/_2$	25681.488	0.692	32	27	$(^3F^\circ)\ ^2D$	17	*A*
$4f^2(^1I)5d$	^2I	$6^1/_2$	25753.492		84	8	$(^1I)\ ^2K$	13	*B*
$4f5d(^1G^\circ)6p$	^2G	$3^1/_2$	25945.396	0.941	44	17	$(^3H^\circ)\ ^4H$	40	*A*
$4f^2(^3P)5d$	^4D	$^1/_2$	26351.911		86	7	$(^3P)\ ^2P$	8	*B*
$4f^2(^3P)5d$	^4D	$1^1/_2$	26479.921		86	4	$(^3P)\ ^2P$	11	*C*
$4f^2(^3P)5d$	^4D	$2^1/_2$	26817.940		88	2	$4f5d(^3P^\circ)6p\ ^4D$	14	*C*
$4f5d(^3H^\circ)6p$	^4I	$4^1/_2$	26841.384	0.954	42	28	$(^1G^\circ)\ ^2G$	35	*A*
$4f5d(^3H^\circ)6p$	^4H	$3^1/_2$	26900.354	0.841	23	18	$(^3F^\circ)\ ^2G$	30	*A*
$4f5d(^3F^\circ)6p$	^4G	$3^1/_2$	27187.047	1.015	51	11	$(^1D^\circ)\ ^2F$	33	*A*
$4f5d(^3F^\circ)6p$	^4F	$2^1/_2$	27249.669	1.061	55	13	$(^3F^\circ)\ ^2D$	32	*A*
$4f^2(^1I)5d$	^2L	$7^1/_2$	27353.67		98	1	$(^3H^\circ)\ ^2K$	6	*B*
$4f5d(^1G^\circ)6p$	^2H	$5^1/_2$	27379.949	1.052	40	33	$(^3H^\circ)\ ^4I$	23	*A*
$4f^2(^3P)5d$	^4D	$3^1/_2$	27514.660		58	13	$4f5d(^3H^\circ)6p\ ^4H$	33	*A*
$4f^2(^1I)5d$	^2K	$6^1/_2$	27706.631		75	15	$(^3H)\ ^2K$	11	*B*
$4f^2(^3P)5d$	^4D	$3^1/_2$	27811.496		26	24	$4f5d(^3H^\circ)6p\ ^4H$	34	*A*
$4f5d(^3F^\circ)6p$	^4G	$2^1/_2$	27812.398		40	17	$(^3G^\circ)\ ^2F$	30	*A*
$4f5d(^3F^\circ)6p$	^4F	$1^1/_2$	27835.233	0.833	32	26	$(^1D^\circ)\ ^2P$	24	*A*
$4f^2(^1I)5d$	^2H	$4^1/_2$	27905.157	0.920	77	7	$(^3F)\ ^2H$	32	*H*
$4f5d(^3H^\circ)6p$	^4H	$4^1/_2$	27934.638	0.969	35	27	$(^1G^\circ)\ ^2H$	33	*A*

TABLE 3. *Even energy levels of* Ce II—Continued

First component								
Configuration	Term	J	Level	g	%	Second component		n, ref.
			cm^{-1}					
$4f^2(^1I)5d$	^2H	$5^1/_2$	27950.889		81	8	$(^3F)\ ^2H$	25 *C*
$4f^2(^1I)5d$	^2L	$8^1/_2$	28096.58		100			3 *B*
$4f^2(^1I)5d$	^2K	$7^1/_2$	28117.519		81	17	$(^3H)\ ^2K$	6 *B*
$4f5d(^3G°)6p$	^4H	$3^1/_2$	28297.473	0.906	46	13	$(^3G°)\ ^2G$	45 *A*
$4f5d(^3H°)6p$	^2H	$4^1/_2$	28334.756	0.891	38	31	$(^3H°)\ ^4I$	33 *A*
$4f5d(^3G°)6p$	^4G	$2^1/_2$	28337.814	0.916	26	16	$(^3G°)\ ^2F$	38 *A*
$4f5d(^1D°)6p$	^2P	$^1/_2$	28345.313	0.387	44	43	$(^3F°)\ ^4D$	14 *H*
$4f5d(^1G°)6p$	^2H	$5^1/_2$	28634.516	1.080	37	27	$(^3H°)\ ^4I$	27 *A*
$4f5d(^1G°)6p$	^2F	$2^1/_2$	28685.758	0.827	37	14	$(^3H°)\ ^4G$	31 *H*
$4f5d(^3H°)6p$	^4H	$4^1/_2$	28725.148	1.002	36	18	$(^1G°)\ ^2H$	37 *A*
$4f5d(^3F°)6p$	^4F	$3^1/_2$	28730.712	1.124	54	7	$(^3F°)\ ^4G$	35 *H*
$4f5d(^3F°)6p$	^2D	$1^1/_2$	29029.353	0.980	31	29	$(^1D°)\ ^2P$	28 *H*
$4f5d(^3F°)6p$	^4G	$4^1/_2$	29166.597	1.124	64	9	$(^3G°)\ ^4G$	33 *A*
$4f5d(^3F°)6p$	^2D	$2^1/_2$	29281.374	1.052	23	22	$(^3F°)\ ^4D$	39 *A*
$4f^2(^3P)5d$	^2F	$3^1/_2$	29364.740	0.894	17	14	$4f5d(^3G°)6p\ ^2F$	35 *H*
$4f5d(^3H°)6p$	^4I	$5^1/_2$	29438.817	1.041	39	31	$(^3H°)\ ^2H$	26 *A*
$4f5d(^3G°)6p$	^4F	$1^1/_2$	29449.778	0.723	36	23	$(^3F°)\ ^4D$	28 *H*
$4f^2(^3P)5d$	^2F	$2^1/_2$	29673.771		51	13	$5d^3\ ^2F$	24 *G*
$4f5d(^3D°)6p$	^2P	$^1/_2$	29790.270	0.45	39	26	$(^3F°)\ ^4D$	15 *H*
$4f5d(^3F°)6p$	^2F	$3^1/_2$	29794.517	1.052	24	15	$(^3F°)\ ^4D$	43 *H*
$4f^2(^3P)5d$	^2F	$3^1/_2$	29807.078	1.055	39	8	$5d^3\ ^2F$	44 *A*
$4f5d(^3G°)6p$	^4H	$4^1/_2$	29908.904	1.074	44	15	$(^3G°)\ ^2G$	36 *A*
$4f5d(^3F°)6p$	^4D	$1^1/_2$	29984.052	0.773	38	14	$(^3G°)\ ^4F$	26 *A*
$4f5d(^3G°)6p$	^4G	$2^1/_2$	29994.041		34	21	$(^3G°)\ ^4F$	38 *H*
$4f5d(^3F°)6p$	^4D	$3^1/_2$	30065.164	1.075	29	12	$(^3H°)\ ^2G$	42 *A*
$4f5d(^3H°)6p$	^4H	$5^1/_2$	30134.910	1.146	53	22	$(^3H°)\ ^2H$	32 *H*
$4f5d(^3G°)6p$	^4G	$3^1/_2$	30166.057	1.036	30	16	$(^1D°)\ ^2F$	41 *A*
$4f5d(^3H°)6p$	^4I	$6^1/_2$	30180.096	1.115	91	9	$(^3H°)\ ^4H$	14 *H*
$4f5d(^3F°)6p$	^4F	$4^1/_2$	30245.878	1.225	41	21	$(^1G°)\ ^2G$	38 *A*
$4f5d(^3H°)6p$	^4G	$2^1/_2$	30425.349	0.831	37	15	$4f5s(^3F°)6p\ ^4G$	43 *A*
$4f5d(^3F°)6p$	^2D	$2^1/_2$	30637.157	1.125	10	10	$(^3G°)\ ^2F$	42 *A*
$4f5d(^3G°)6p$	^4H	$4^1/_2$	30702.610	1.079	30	15	$(^3F°)\ ^2G$	39 *A*
$4f5s(^3F°)6p$	^4F	$1^1/_2$	30745.286		29	28	$4f5d(^3D°)6p\ ^4F$	25 *G*
$4f5d(^3G°)6p$	^4G	$3^1/_2$	30829.124	1.016	25	12	$(^1D°)\ ^2F$	46 *A*
$4f5d(^1D°)6p$	^2D	$1^1/_2$	30961.518	1.043	25	17	$(^3F°)\ ^4D$	30 *H*
$4f5d(^1D°)6p$	^2P	$^1/_2$	31032.611	0.692	31	24	$(^3F°)\ ^4D$	16 *H*
$4f5d(^3F°)6p$	^2F	$2^1/_2$	31043.110	1.014	29	26	$(^3F°)\ ^4D$	40 *H*
$4f5d(^3G°)6p$	^4F	$4^1/_2$	31075.603	1.207	24	23	$(^3G°)\ ^4G$	42 *A*

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TABLE 3. *Even energy levels of* Ce II—Continued

First component						Second component			
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f5d(^3F^\circ)6p$	^4G	$5^1/_2$	31089.731	1.221	59	12	$(^3G^\circ)$ ^4H	24	*H*
$4f5d(^3H^\circ)6p$	^4H	$6^1/_2$	31155.623	1.203	80	9	$(^3H^\circ)$ ^4I	15	*H*
$4f5d(^3D^\circ)6p$	^2P	$1^1/_2$	31170.645	1.118	31	19	$(^3D^\circ)$ ^4D	32	*H*
$4f5d(^3F^\circ)6p$	^4D	$3^1/_2$	31207.927	1.123	15	12	$(^3G^\circ)$ ^4F	43	*A*
$4f5d(^1D^\circ)6p$	^2F	$2^1/_2$	31234.878	0.975	20	16	$(^1D^\circ)$ ^2D	39	*H*
$4f5d(^3D^\circ)6p$	^4F	$2^1/_2$	31369.093		15	15	$5d^3$ ^4F	36	*G*
$4f5d(^3G^\circ)6p$	^4F	$3^1/_2$	31558.626	1.167	13	12	$(^3D^\circ)$ ^4F	47	*A*
$4f^2(^1I)5d$	^2G	$4^1/_2$	31568.019	1.138	33	17	$4f5d(^3G^\circ)6p$ ^4G	35	*H*
$4f5d(^3G^\circ)6p$	^4H	$5^1/_2$	31738.484	1.140	64	13	$(^3F^\circ)$ ^4G	22	*A*
$4f^2(^3P)5d$	^2D	$1^1/_2$	31766.109		32	11	$5d^3$ $^2D1$	31	*G*
$4f5d(^3D^\circ)6p$	^4P	$2^1/_2$	31851.397	1.238	20	18	$(^3D^\circ)$ ^4D	38	*A*
$4f5d(^3G^\circ)6p$	^4G	$4^1/_2$	31930.936	1.149	31	20	$4f^2(^1I)5d$ ^2G	35	*H*
$4f5d(^3H^\circ)6p$	^4G	$3^1/_2$	31937.653		29	23	$(^3H^\circ)$ ^2G	43	*H*
$4f6s(^3F^\circ)6p$	^4F	$2^1/_2$	32138.698	1.008	23	11	$4f5d(^3G^\circ)6p$ ^2F	37	*A*
$4f^2(^1I)5d$	^2G	$4^1/_2$	32197.982	1.195	28	16	$4f5d(^3G^\circ)6p$ ^4F	39	*H*
$4f5d(^3H^\circ)6p$	^4I	$7^1/_2$	32269.252	1.195	100			5	*H*
$4f5d(^3D^\circ)6p$	^4P	$^1/_2$	32314.466		57	20	$(^3D^\circ)$ ^4D	16	*G*
$4f5d(^3F^\circ)6p$	^2F	$3^1/_2$	32318.175	1.118	15	14	$(^3G^\circ)$ ^2G	51	*A*
$4f^2(^1I)5d$	^2G	$3^1/_2$	32413.346	1.019	68	7	$4f5d(^1H^\circ)6p$ ^2G	43	*H*
$4f5d(^3G^\circ)6p$	^4G	$5^1/_2$	32492.038	1.221	43	28	$(^3H^\circ)$ ^4G	28	*H*
$5d^3$	^4F	$1^1/_2$	32507.442	0.643	26	22	$4f^2(^3P)5d$ ^2D	26	*H*
$4f5d(^3D^\circ)6p$	^4D	$1^1/_2$	32638.165	1.070	37	12	$(^3P^\circ)$ ^4D	29	*H*
$4f^2(^3P)5d$	^2D	$2^1/_2$	32716.647	1.151	28	8	$5d^3$ ^4F	31	*H*
$4f5d(^3H^\circ)6p$	^2I	$5^1/_2$	32802.165	0.948	83	3	$(^1H^\circ)$ ^2I	28	*H*
$4f5d(^3P^\circ)6p$	^4P	$^1/_2$	32860.353		56	9	$(^3D^\circ)$ ^2P	17	*G*
$4f5d(^3F^\circ)6p$	^2G	$3^1/_2$	32862.767	1.009	21	17	$(^3G^\circ)$ ^2F	52	*A*
$4f^2(^3P)5d$	^2D	$2^1/_2$	33045.095	1.188	35	15	$4f5d(^3D^\circ)6p$ ^4P	43	*H*
$4f5d(^3D^\circ)6p$	^4P	$1^1/_2$	33050.291	1.426	48	14	$(^3D^\circ)$ ^2P	33	*H*
$5d^3$	^4F	$3^1/_2$	33079.512	1.257	24	17	$4f6s(^3F^\circ)6p$ ^4F	41	*H*
$5d^3$	^4F	$2^1/_2$	33148.589	1.098	21	16	$4f5d(^3D^\circ)6p$ ^4P	38	*H*
$4f5d(^3P^\circ)6p$	^4P	$^1/_2$	33177.196	1.484	21	18	$(^3D^\circ)$ ^4P	15	*H*
$4f5d(^1F^\circ)6p$	^2G	$4^1/_2$	33296.805		18	18	$(^3G^\circ)$ ^2G	42	*H*
$4f5d(^3D^\circ)6p$	^4D	$3^1/_2$	33409.897		15	14	$(^3G^\circ)$ ^2F	52	*H*
$4f5d(^3G^\circ)6p$	^4H	$6^1/_2$	33531.388	1.257	95	2	$(^3H^\circ)$ ^4H	12	*H*
$4f5s(^3F^\circ)6p$	^2F	$2^1/_2$	33552.582	0.920	13	11	$(^1F^\circ)$ ^2F	42	*A*
$4f6s(^3F^\circ)6p$	^4F	$1^1/_2$	33574.145	0.675	20	15	$(^3D^\circ)$ ^4F	30	*H*
$4f5d(^3H^\circ)6p$	^4G	$5^1/_2$	33659.968	1.249	41	21	$(^3G^\circ)$ ^4G	20	*H*
$4f5d(^3D^\circ)6p$	^4D	$2^1/_2$	33808.317	1.230	44	16	$(^3P^\circ)$ ^4D	44	*A*
$4f5d(^3G^\circ)6p$	^2H	$4^1/_2$	33811.567	1.090	43	16	$(^3G^\circ)$ ^2G	40	*H*
$4f5d(^3P^\circ)6p$	^4P	$1^1/_2$	33876.377	1.535	68	8	$5d^2(^3P)6s$ ^4P	34	*H*

TABLE 3. *Even energy levels of* Ce II — Continued

First component									
Configuration	Term	J	Level	g	%		Second component	n, ref.	
			cm^{-1}						
$4f5d(^3D^\circ)6p$	^4F	$3^1/_2$	33977.140	1.186	17	10	$4f6s(^1F^\circ)6p\ ^2F$	45	*A*
$4f6s(^3F^\circ)6p$	^4D	$^1/_2$	34006.822		39	26	$4f5d(^3P^\circ)6p\ ^4D$	8	*B*
$4f5d(^3G^\circ)6p$	^2H	$4^1/_2$	34044.441	1.102	22	16	$5d^3\ ^4F$	43	*H*
$5d^3$	^4F	$3^1/_2$	34155.311	1.151	19	10	$4f6s(^3F^\circ)6p\ ^4F$	41	*A*
$4f^2(^1S)6s$	^2S	$^1/_2$	34159.877		68	12	$5d^2(^1S)6s\ ^2S$	11	*B*
$4f6s(^3F^\circ)6p$	^4F	$1^1/_2$	34166.039		17	15	$(^3F^\circ)\ ^4D$	36	*H*
$4f5d(^3H^\circ)6p$	^2G	$4^1/_2$	34295.450	1.125	45	13	$(^3H^\circ)\ ^4G$	49	*H*
$4f6s(^3F^\circ)6p$	^4G	$2^1/_2$	34333.096	1.069	28	13	$(^1F^\circ)\ ^2D$	43	*A*
$4f5d(^1F^\circ)6p$	^2D	$2^1/_2$	34426.037	0.997	24	9	$4f6s(^3F^\circ)6p\ ^4D$	41	*A*
$4f5d(^3H\ ^\circ)6p$	^2I	$6^1/_2$	34513.468	1.079	84	8	$(^3H^\circ)\ ^4H$	16	*H*
$4f6s(^3F^\circ)6p$	^4D	$1^1/_2$	34767.688	0.974	18	17	$4f5d(^3D^\circ)6p\ ^2D$	30	*H*
$4f5d(^3P^\circ)6p$	^4P	$2^1/_2$	34813.202	1.269	28	16	$(^3D^\circ)\ ^2F$	44	*H*
$4f5d(^1F^\circ)6p$	^2G	$3^1/_2$	34920.788	1.109	25	20	$(^3D^\circ)\ ^4D$	47	*A*
$4f5d(^3D^\circ)6p$	^4F	$4^1/_2$	34928.969	1.275	38	22	$5d^3\ ^4F$	37	*H*
$4f6s(^3F^\circ)6p$	^4D	$2^1/_2$	34934.421	1.134	29	17	$(^3F^\circ)\ ^4F$	38	*A*
$4f5d(^3P^\circ)6p$	^4S	$1^1/_2$	35197.840	0.999	61	8	$(^3P^\circ)\ ^2P$	32	*H*
$4f5d(^3P^\circ)6p$	^4P	$2^1/_2$	35225.656	1.217	23	10	$(^3D^\circ)\ ^2F$	43	*H*
$4f6s(^3F^\circ)6p$	^4G	$3^1/_2$	35346.282	1.119	18	16	$(^3F^\circ)\ ^4F$	39	*A*
$4f5d(^3D^\circ)6p$	^2D	$1^1/_2$	35457.318	2.799	19	19	$(^3P^\circ)\ ^2D$	29	*H*
$4f6s(^3F^\circ)6p$	^4D	$3^1/_2$	35558.702	1.197	15	15	$(^3F^\circ)\ ^4G$	41	*A*
$4f5d(^3G^\circ)6p$	^2H	$5^1/_2$	35716.083	1.096	61	9	$(^3H^\circ)\ ^2H$	28	*H*
$4f6s(^1F^\circ)6p$	^2G	$4^1/_2$	35807.568	1.199	26	15	$(^3F^\circ)\ ^2G$	38	*H*
$4f6s(^3F^\circ)6p$	^4G	$3^1/_2$	35925.682	1.075	17	16	$(^3F^\circ)\ ^4D$	44	*H*
$4f6s(^3F^\circ)6p$	^4D	$3^1/_2$	36112.021	1.184	20	19	$4f5d(^1F^\circ)6p\ ^2F$	46	*H*
$4f6s(^1F^\circ)6p$	^2F	$2^1/_2$	36137.604	1.060	20	19	$4f5d(^3D^\circ)6p\ ^2D$	40	*H*
$4f6s(^3F^\circ)6p$	^4G	$4^1/_2$	36202.557	1.186	47	14	$4f5d(^3H^\circ)6p\ ^4G$	40	*H*
$4f5d(^3P^\circ)6p$	^2P	$^1/_2$	36288.661		36	15	$5d^2(^3P)6s\ ^2P$	17	*G*
$4f5d(^3P^\circ)6p$	^4S	$1^1/_2$	36516.798		25	22	$(^3P^\circ)\ ^2P$	38	*H*
$4f5d(^3D^\circ)6p$	^2D	$2^1/_2$	36844.305	1.091	18	16	$4f6s(^1F^\circ)6p\ ^2D$	45	*H*
$4f6s(^1F^\circ)6p$	^2G	$3^1/_2$	36893.770	1.062	21	17	$4f5d(^3D^\circ)6p\ ^2F$	40	*H*
$4f5d(^1H^\circ)6p$	^2H	$4^1/_2$	36923.789	1.104	27	12	$(^1F^\circ)\ ^2G$	42	*H*
$4f5d(^1F^\circ)6p$	^2D	$1^1/_2$	37078.879	0.695	20	18	$5d^2(^3F)6s\ ^4F$	28	*H*
$4f6s(^3F^\circ)6p$	^4G	$4^1/_2$	37196.137	1.175	17	15	$(^3F^\circ)\ ^4F$	35	*H*
$4f5d(^3P^\circ)6p$	^2D	$1^1/_2$	37232.438	0.625	25	25	$5d^2(^3F)6s\ ^4F$	30	*H*
$4f5d(^1F^\circ)6p$	^2F	$2^1/_2$	37342.327	1.194	19	16	$4f^2(^1S)5d\ ^2D$	41	*H*
$4f5d(^3P^\circ)6p$	^4D	$1^1/_2$	37530.630	1.112	27	12	$4f6s(^3F^\circ)6p\ ^4D$	31	*H*
$4f5d(^1F^\circ)6p$	^2F	$3^1/_2$	37588.473	1.142	38	19	$(^3D^\circ)\ ^2F$	44	*H*
$4f6s(^3F^\circ)6p$	^4D	$^1/_2$	37615.734		40	30	$4f5d(^3P^\circ)6p\ ^4D$	16	*G*
$4f5d(^3P^\circ)6p$	^2D	$2^1/_2$	37652.091	1.108	29	25	$(^3P^\circ)\ ^4D$	46	*H*

TABLE 3. *Even energy levels of* Ce II – Continued

First component						Second component			
Configuration	Term	J	Level	g	%			n, ref.	
			cm^{-1}						
$4f^2(^1S)5d$	^2D	$1^1/_2$	37804.434	0.908	14	14	$5d^2(^3F)6s\ ^4F$	32	*H*
$5d^2(^3F)6s$	^4F	$2^1/_2$	37848.550	1.082	49	23	$4f5d(^3G^\circ)6p\ ^4F$	36	*H*
$4f5d(^1H^\circ)6p$	^2H	$5^1/_2$	37970.532		56	22	$5d^3\ ^2H$	30	*H*
$5d^3$	^2G	$3^1/_2$	37973.771		53	13	$4f5d(^1F^\circ)6p\ ^2G$	40	*H*
$4f5d(^1F^\circ)6p$	^2G	$4^1/_2$	38134.400	0.621	25	22	$(^1H^\circ)\ ^2H$	29	*H*
$4f6s(^3F^\circ)6p$	^4G	$5^1/_2$	38137.682		71	13	$4f5d(^3H^\circ)6p\ ^4G$	30	*H*
$4f5d(^3P^\circ)6p$	^2S	$^1/_2$	38269.974		33	23	$5d^3\ ^4P$	17	*G*
$4f6s(^1F^\circ)6p$	^2D	$1^1/_2$	38452.750		24	15	$(^3F^\circ)\ ^4D$	32	*H*
$4f5d(^3D^\circ)6p$	^2D	$2^1/_2$	38529.021	1.169	19	12	$4f^2(^1S)5d\ ^2D$	42	*H*
$5d^3$	^2G	$4^1/_2$	38541.873	1.097	35	10	$4f5d(^1H^\circ)6p\ ^2G$	43	*H*
$5d^2(^3F)6s$	^4F	$3^1/_2$	38809.476	1.192	53	22	$4f5d(^3G^\circ)6p\ ^4F$	37	*H*
$4f6s(^3F^\circ)6p$	^4D	$2^1/_2$	38832.709	1.273	35	13	$(^1F^\circ)\ ^2D$	43	*H*
$4f5d(^3P^\circ)6p$	^2S	$^1/_2$	38892.501		30	24	$5d^3\ ^4P$	15	*G*
$5d^3$	^4P	$1^1/_2$	38937.812	1.399	34	9	$4f5d(^3P^\circ)6p\ ^2P$	29	*H*
$4f5d(^3P^\circ)6p$	^4D	$3^1/_2$	39394.990	1.396	42	23	$4f6s(^3F^\circ)6p\ ^4D$	36	*H*
$5d^3$	^4P	$2^1/_2$	39838.445	1.577	67	16	$4f^2(^3P)5d\ ^4P$	31	*H*
$5d^3$	^2P	$^1/_2$	39855.395		30	22	^4P	16	*G*
$5d^2(^3F)6s$	^4F	$4^1/_2$	39871.833		63	22	$4f5d(^3G^\circ)6p\ ^4F$	29	*H*
$5d^3$	^2P	$1^1/_2$	40511.127		27	22	^4P	30	*H*
$4f5d(^1H^\circ)6p$	^2I	$5^1/_2$	40673.575		74	13	$5d^3\ ^2H$	24	*H*
$4f5d(^1H^\circ)6p$	^2G	$4^1/_2$	40858.205		45	14	$(^1H^\circ)\ ^2H$	38	*H*
$5d^3$	^2H	$4^1/_2$	41083.294		49	16	$4f5d(^1H^\circ)6p\ ^2H$	29	*H*
$4f5d(^1H^\circ)6p$	^2G	$3^1/_2$	41085.208		57	14	$5d^2(^1G)6s\ ^2G$	32	*H*
$5d^2(^3F)6s$	^2F	$2^1/_2$	41198.309		51	9	$5d^3\ ^2F$	33	*H*
$5d^3$	^2H	$5^1/_2$	41289.971	1.090	53	27	$4f5d(^1H^\circ)6p\ ^2H$	24	*H*
$4f5d(^1P^\circ)6p$	^2P	$^1/_2$	41589.12		73	13	$(^3P^\circ)\ ^2S$	10	*G*
$4f5d(^1P^\circ)6p$	^2D	$1^1/_2$	41748.279	0.880	23	16	$5d^2(^1D)6s\ ^2D$	30	*H*
$4f5d(^1H^\circ)6p$	^2I	$6^1/_2$	41992.356		90	6	$(^3H^\circ)\ ^2I$	11	*H*
$5d^2(^1D)6s$	^2D	$2^1/_2$	42033.653	1.161	21	20	$4f^2(^1S)5d\ ^2D$	35	*H*
$4f5d(^1P^\circ)6p$	^2P	$1^1/_2$	42458.743		40	10	$5d^3\ ^2D1$	23	*G*
$5d^2(^3F)6s$	^2F	$3^1/_2$	42573.191	1.143	52	19	$5d^3\ ^2F$	30	*H*
$4f5d(^1P^\circ)6p$	^2D	$1^1/_2$	43167.878		35	32	$(^1P^\circ)\ ^2P$	24	*G*
$4f5d(^1P^\circ)6p$	^2S	$^1/_2$	43334.332		66	15	$(^3P^\circ)\ ^2S$	12	*G*
$4f5d(^1P^\circ)6p$	^2D	$2^1/_2$	43460.533	1.170	64	7	$5d^3\ ^2D1$	32	*H*
$5d^2(^3P)6s$	^4P	$^1/_2$	43643.230		75	9	$4f5d(^3D^\circ)6p\ ^4P$	13	*G*
$5d^2(^3P)6s$	^4P	$1^1/_2$	44081.375		77	7	$4f5d(^3D^\circ)6p\ ^4P$	21	*G*
$5d^2(^3P)6s$	^4P	$2^1/_2$	44594.928	1.573	68	9	$5d^3\ ^2D1$	25	*H*
$5d^3$	$^2D1$	$1^1/_2$	46987.371		31	24	$5d^2(^1D)6s\ ^2D$	11	*G*

TABLE 3. *Even energy levels of* Ce II—Continued

First component									
Configuration	Term	J	Level	g	%	Second component		n, ref.	
			cm^{-1}						
$5d^2(^1D)6s$	^2D	$2^1/_2$	47466.445		34	29	$5d^3\ ^2D1$	11	*C*
$5d^2(^1G)6s$	^2G	$3^1/_2$	47489.280		48	22	$4f6s(^3F°)6p\ ^2G$	21	*G*
$4f6s(^3F°)6p$	^2F	$2^1/_2$	48024.675		36	28	$5d^3\ ^2F$	28	*G*
$5d^2(^1G)6s$	^2G	$4^1/_2$	48151.739		67	8	$4f6s(^1F°)6p\ ^2G$	15	*B*
$4f6s(^3F°)6p$	^2D	$1^1/_2$	48630.464		26	22	$5d^2(^1D)6s\ ^2D$	11	*B*
$5d^3$	^2F	$3^1/_2$	48657.336		49	19	$5d^2(^3F)6s\ ^2F$	15	*B*
$5d^3$	^2F	$2^1/_2$	49089.486		38	18	$4f6s(^3F°)6p\ ^2F$	14	*C*
$4f6s(^3F°)6p$	^2F	$3^1/_2$	50368.336		24	15	$(^3F°)\ ^2G$	13	*B*
$5d(^2D)6s^2(^1S)$	^2D	$2^1/_2$	50564.294		32	26	$4f6s(^3F°)6p\ ^2D$	8	*B*
$4f6s(^3F°)6p$	^2G	$3^1/_2$	51171.581		23	20	$(^3F°)\ ^2F$	12	*C*
$4f6s(^3F°)6p$	^2G	$4^1/_2$	52058.587		51	16	$(^1F°)\ ^2G$	11	*B*

TABLE 4. *Spectral lines of* Ce II

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2512.814	6	*WA*	39784.042			2582.320	1	*GJ*	38713.280	$3745°_{1\,1/2}-42458_{1\,1/2}$	12
2513.304	60	*WA*	39776.287	$7713°_{4\,1/2}-47489_{3\,1/2}$	96	2582.471	4	*WA*	38711.016		
2513.868	3	*WA*	39767.363			2582.590	2	*MT*	38709.233		
2514.862	5	*WA*	39751.646			2582.793	8	*WA*	38706.191		
2515.360	5	*WA*	39743.777	$8280°_{2\,1/2}-48024_{2\,1/2}$	48	2583.128	8	*WA*	38701.171	$2382°_{4\,1/2}-41083_{4\,1/2}$	124
2518.505	80	*WA*	39694.149			2584.203	8	*WA*	38685.073	$8804°_{4\,1/2}-47489_{3\,1/2}$	17
2519.026	30	*WA*	39685.940	$987°_{4\,1/2}-40673_{5\,1/2}$	−23	2585.187	4	*WA*	38670.349	$3363°_{2\,1/2}-42033_{2\,1/2}$	123
2519.850	1	*GJ*	39672.964	$1410°_{4\,1/2}-41083_{4\,1/2}$	−25	2586.562	4	*WA*	38649.793		
2520.540	5	*WA*	39662.104			2587.883	3	*WA*	38630.066	$5964°_{3\,1/2}-44594_{2\,1/2}$	34
2524.000	2	*WA*	39607.737	$2140°_{0\,1/2}-41748_{1\,1/2}$	−49	2588.426	5	*WA*	38621.962	$10646_{5\,1/2}-49267°_{4\,1/2}$	51
2526.422	3	*WA*	39569.769	$10798°_{2\,1/2}-50368_{3\,1/2}$	−20	2588.885	8	*WA*	38615.115	$11949°_{3\,1/2}-50564_{2\,1/2}$	1
2528.287	4	*WA*	39540.582			2589.559	4	*WA*	38605.065	$9725_{3\,1/2}-48330°_{3\,1/2}$	9
2531.147	4	*WA*	39495.907	$7092_{5\,1/2}-46588°_{5\,1/2}$	42	2590.805	5	*WA*	38586.500	$7011_{4\,1/2}-45598°_{3\,1/2}$	4
2532.415	7	*WA*	39476.133	$5118°_{2\,1/2}-44594_{2\,1/2}$	11	2591.885	3	*WA*	38570.423		
2534.180	4	*WA*	39448.640	$2140°_{0\,1/2}-41589_{0\,1/2}$	−2	2592.338	20	*WA*	38563.683	$2634°_{2\,1/2}-41198_{2\,1/2}$	41
2534.866	3	*WA*	39437.965	$2595°_{1\,1/2}-42033_{2\,1/2}$	−45	2592.801	5	*WA*	38556.797	$2641°_{3\,1/2}-41198_{2\,1/2}$	48
2542.361	5	*WA*	39321.708			2593.802	4	*WA*	38541.918	$0°_{3\,1/2}-38541_{4\,1/2}$	46
2543.086	60	*WA*	39310.499	$9778°_{2\,1/2}-49089_{2\,1/2}$	0	2594.787	3	*WA*	38527.289		
2543.536	3	*WA*	39303.544	$10314_{4\,1/2}-49617°_{5\,1/2}$	7	2595.302	3	*WA*	38519.644		
2544.269	5	*WA*	39292.222			2595.575	5	*WA*	38515.592	$10114°_{2\,1/2}-48630_{1\,1/2}$	19
2544.376	3	*WA*	39290.569	$8175°_{2\,1/2}-47466_{2\,1/2}$	−12	2596.358	4	*WA*	38503.978	$2581°_{4\,1/2}-41085_{3\,1/2}$	21
2546.140	1	*GJ*	39263.350	$1410°_{4\,1/2}-40673_{5\,1/2}$	80	2596.485	4	*WA*	38502.095	$2581°_{4\,1/2}-41083_{4\,1/2}$	58
2547.187	3	*WA*	39247.212	$7341_{5\,1/2}-46588°_{5\,1/2}$	89	2598.250	5	*WA*	38475.942	$2382°_{4\,1/2}-40858_{4\,1/2}$	−16
2547.586	3	*WA*	39241.066	$7746°_{2\,1/2}-46987_{1\,1/2}$	−119	2600.434	5	*WA*	38443.629	$2641°_{3\,1/2}-41085_{3\,1/2}$	−25
2547.681	3	*WA*	39239.603			2600.788	5	*WA*	38438.397		
2548.683	90	*WA*	39224.177	$8927°_{5\,1/2}-48151_{4\,1/2}$	−47	2602.088	6	*WA*	38419.195	$11949°_{3\,1/2}-50368_{3\,1/2}$	39
2548.802	50	*WA*	39222.346	$11949°_{3\,1/2}-51171_{3\,1/2}$	−55	2602.772	5	*WA*	38409.098		
2549.260	3	*WA*	39215.299			2603.444	3	*WA*	38399.185	$13659°_{4\,1/2}-52058_{4\,1/2}$	−72
2549.717	2	*WA*	39208.271	$8280°_{2\,1/2}-47489_{3\,1/2}$	−62	2604.590	5	*WA*	38382.291	$10274°_{3\,1/2}-48657_{3\,1/2}$	−73
2550.095	4	*WA*	39202.460			2605.378	5	*WA*	38370.683	$2140°_{0\,1/2}-40511_{1\,1/2}$	48
2551.206	2	*WA*	39185.389	$8280°_{2\,1/2}-47466_{2\,1/2}$	−109	2606.088	2	*WA*	38360.230	$5283°_{0\,1/2}-43643_{0\,1/2}$	29
2551.771	20	*WA*	39176.713			2607.344	3	*WA*	38341.752	$5118°_{2\,1/2}-43460_{2\,1/2}$	25
2552.261	4	*WA*	39169.193	$7818°_{1\,1/2}-46987_{1\,1/2}$	−27	2609.116	3	*WA*	38315.713		
2553.344	5	*WA*	39152.580	$2595°_{1\,1/2}-41748_{1\,1/2}$	−54	2609.502	50	*WA*	38310.046	$8278_{5\,1/2}-46588°_{5\,1/2}$	−30
2553.456	5	*WA*	39150.863	$7011_{4\,1/2}-46162°_{4\,1/2}$	−24	2609.900	20	*MT*	38304.204	$12260°_{3\,1/2}-50564_{2\,1/2}$	−11
2553.588	3	*WA*	39148.839			2610.334	4	*WA*	38297.836		
2555.949	5	*WA*	39112.678	$2879°_{5\,1/2}-41992_{6\,1/2}$	18	2610.531	3	*WA*	38294.946	$2563°_{5\,1/2}-40858_{4\,1/2}$	−25
2558.354	3	*WA*	39075.913			2610.775	3	*WA*	38291.367	$2382°_{4\,1/2}-40673_{5\,1/2}$	39
2561.393	3	*WA*	39029.553	$10058_{6\,1/2}-49087°_{7\,1/2}$	−100	2610.985	3	*WA*	38288.288	$3745°_{1\,1/2}-42033_{2\,1/2}$	111
2561.511	6	*WA*	39027.756	$11340°_{3\,1/2}-50368_{3\,1/2}$	9	2613.897	50	*MT*	38245.635	$9778°_{2\,1/2}-48024_{2\,1/2}$	−53
2562.424	25	*WA*	39013.851	$9316_{3\,1/2}-48330°_{3\,1/2}$	−26	2614.292	3	*WA*	38239.857	$3508°_{0\,1/2}-41748_{1\,1/2}$	49
2566.374	4	*WA*	38953.807	$10314_{4\,1/2}-49267°_{4\,1/2}$	−12	2614.566	5	*WA*	38235.850	$10314_{4\,1/2}-48549°_{4\,1/2}$	22
2567.679	4	*WA*	38934.011	$9723°_{4\,1/2}-48657_{3\,1/2}$	10	2615.453	3	*WA*	38222.884		
2568.705	3	*WA*	38918.460			2615.877	6	*WA*	38216.689	$2641°_{3\,1/2}-40858_{4\,1/2}$	43
2569.168	40	*WA*	38911.447	$12260°_{3\,1/2}-51171_{3\,1/2}$	−55	2617.108	2	*WA*	38198.714	$3793°_{6\,1/2}-41992_{6\,1/2}$	−7
2569.879	25	*WA*	38900.682			2617.723	5	*WA*	38189.740		
2571.361	5	*WA*	38878.263	$9778°_{2\,1/2}-48657_{3\,1/2}$	−86	2619.552	4	*WA*	38163.077	$11454_{6\,1/2}-49617°_{5\,1/2}$	79
2571.930	7	*WA*	38869.663	$3703°_{3\,1/2}-42573_{3\,1/2}$	66	2619.715	4	*WA*	38160.703		
2573.141	50	*WA*	38851.371	$9778°_{2\,1/2}-48630_{1\,1/2}$	−106	2619.804	6	*WA*	38159.407	$11458_{5\,1/2}-49617°_{5\,1/2}$	60
2575.933	7	*WA*	38809.263			2619.960	3	*WA*	38157.135	$5924°_{1\,1/2}-44081_{1\,1/2}$	−35

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2620.931	5	*WA*	38142.999	$9316_{3\,1/2}-47459°_{2\,1/2}$	17	2660.638	4	*WA*	37573.791	$4459°_{3\,1/2}-42033_{2\,1/2}$	9
2622.784	4	*WA*	38116.053	$10035°_{5\,1/2}-48151_{4\,1/2}$	25	2661.352	2	*MT*	37563.712	$6517°_{2\,1/2}-44081_{1\,1/2}$	−43
2622.972	4	*WA*	38113.321	$4459°_{3\,1/2}-42573_{3\,1/2}$	2	2661.459	1	*WA*	37562.202	$5010°_{2\,1/2}-42573_{3\,1/2}$	−118
2623.315	5	*WA*	38108.338	$12260°_{3\,1/2}-50368_{3\,1/2}$	90	2661.617	7	*WA*	37559.972	$6521°_{1\,1/2}-44081_{1\,1/2}$	−70
2624.418	4	*WA*	38092.322	$2581°_{4\,1/2}-40673_{5\,1/2}$	5	2662.024	6	*WA*	37554.230	$987°_{4\,1/2}-38541_{4\,1/2}$	−31
2625.186	3	*WA*	38081.179			2662.170	3	*WA*	37552.170	$13012°_{2\,1/2}-50564_{2\,1/2}$	−38
2625.454	3	*WA*	38077.292	$6517°_{2\,1/2}-44594_{2\,1/2}$	−16	2662.587	5	*WA*	37546.289	$4201°_{1\,1/2}-41748_{1\,1/2}$	−96
2626.265	4	*WA*	38065.535			2663.297	4	*WA*	37536.280	$5924°_{1\,1/2}-43460_{2\,1/2}$	−48
2629.977	3	*WA*	38011.811			2663.429	3	*WA*	37534.420	$11015_{3\,1/2}-48549°_{4\,1/2}$	10
2630.616	5	*WA*	38002.578	$12365°_{4\,1/2}-50368_{3\,1/2}$	40	2663.638	4	*WA*	37531.475	$6549°_{2\,1/2}-44081_{1\,1/2}$	9
2632.106	4	*WA*	37981.067			2664.048	4	*WA*	37525.699		
2634.547	5	*WA*	37945.878			2664.737	5	*WA*	37515.997		
2635.150	60	*WA*	37937.196	$7011_{4\,1/2}-44949°_{4\,1/2}$	−10	2665.002	7	*WA*	37512.267	$13659°_{4\,1/2}-51171_{3\,1/2}$	6
2636.355	4	*WA*	37919.856			2665.146	2	*WA*	37510.240	$10820_{2\,1/2}-48330°_{3\,1/2}$	−63
2636.658	2	*WA*	37915.499	$2595°_{1\,1/2}-40511_{1\,1/2}$	17	2665.271	8	*WA*	37508.481	$11759_{5\,1/2}-49267°_{4\,1/2}$	−33
2637.055	6	*WA*	37909.792	$10114°_{2\,1/2}-48024_{2\,1/2}$	0	2666.135	2	*WA*	37496.327	$3793°_{6\,1/2}-41289_{5\,1/2}$	−9
2637.457	2	*WA*	37904.014	$10646_{5\,1/2}-48549°_{4\,1/2}$	94	2666.255	2	*WA*	37494.639	$3703°_{3\,1/2}-41198_{2\,1/2}$	−75
2637.958	5	*WA*	37896.815			2666.494	60	*WA*	37491.279	$3593°_{4\,1/2}-41085_{3\,1/2}$	−52
2638.104	3	*WA*	37894.718			2666.628	3	*WA*	37489.395	$3593°_{4\,1/2}-41083_{4\,1/2}$	−16
2638.807	8	*WA*	37884.623	$8278_{5\,1/2}-46162°_{4\,1/2}$	−14	2668.219	4	*WA*	37467.042	$8131_{4\,1/2}-45598°_{3\,1/2}$	−41
2639.367	5	*WA*	37876.586	$2634°_{2\,1/2}-40511_{1\,1/2}$	125	2669.228	1	*WA*	37452.880	$3745°_{1\,1/2}-41198_{2\,1/2}$	46
2639.770	4	*WA*	37870.804			2669.585	3	*WA*	37447.872	$5010°_{2\,1/2}-42458_{1\,1/2}$	0
2640.646	5	*WA*	37858.241	$11759_{5\,1/2}-49617°_{5\,1/2}$	9	2671.185	3	*WA*	37425.442		
2640.750	5	*WA*	37856.750	$7092_{5\,1/2}-44949°_{4\,1/2}$	5	2671.661	4	*WA*	37418.775		
2641.456	5	*WA*	37846.633	$10703_{4\,1/2}-48549°_{4\,1/2}$	−51	2671.908	5	*WA*	37415.316		
2642.483	4	*WA*	37831.924	$10798°_{2\,1/2}-48630_{1\,1/2}$	23	2672.280	3	*WA*	37410.108	$5924°_{1\,1/2}-43334_{0\,1/2}$	−21
2644.027	3	*WA*	37809.833			2672.403	4	*WA*	37408.386		
2646.640	3	*WA*	37772.507			2672.777	3	*WA*	37403.151		
2647.007	4	*WA*	37767.270	$4266°_{3\,1/2}-42033_{2\,1/2}$	12	2673.073	40	*WA*	37399.010	$10646_{5\,1/2}-48045°_{6\,1/2}$	−19
2647.105	25	*WA*	37765.871	$9723°_{4\,1/2}-47489_{3\,1/2}$	−73	2673.545	6	*WA*	37392.408	$7202°_{2\,1/2}-44594_{2\,1/2}$	10
2647.258	3	*WA*	37763.689	$11325°_{2\,1/2}-49089_{2\,1/2}$	−15	2673.805	3	*WA*	37388.772		
2648.247	3	*WA*	37749.587	$10274°_{3\,1/2}-48024_{2\,1/2}$	−116	2674.447	3	*WA*	37379.797	$3703°_{3\,1/2}-41083_{4\,1/2}$	98
2648.299	20	*WA*	37748.845	$11340°_{3\,1/2}-49089_{2\,1/2}$	−42	2674.587	4	*WA*	37377.841	$10088°_{1\,1/2}-47466_{2\,1/2}$	36
2649.330	25	*WA*	37734.157	$9725_{3\,1/2}-47459°_{2\,1/2}$	−3	2674.830	6	*WA*	37374.446	$10114°_{2\,1/2}-47489_{3\,1/2}$	49
2650.298	3	*WA*	37720.375			2675.733	3	*WA*	37361.833		
2650.682	2	*WA*	37714.911	$2140°_{0\,1/2}-39855_{0\,1/2}$	4	2676.121	5	*WA*	37356.416		
2651.009	240	*WA*	37710.259	$9778°_{2\,1/2}-47489_{3\,1/2}$	−34	2676.355	5	*WA*	37353.150	$9634°_{1\,1/2}-46987_{1\,1/2}$	−31
2651.418	4	*WA*	37704.442	$9725_{3\,1/2}-47430°_{3\,1/2}$	−8	2676.467	5	*WA*	37351.587	$10114°_{2\,1/2}-47466_{2\,1/2}$	26
2652.003	9	*WA*	37696.126	$3593°_{4\,1/2}-41289_{5\,1/2}$	37	2676.623	3	*WA*	37349.411		
2652.152	4	*WA*	37694.008			2676.755	4	*WA*	37347.569		
2652.333	2	*WA*	37691.436	$8896_{5\,1/2}-46588°_{5\,1/2}$	34	2677.293	3	*WA*	37340.064		
2652.531	3	*WA*	37688.622			2677.592	8	*WA*	37335.895	$7259°_{3\,1/2}-44594_{2\,1/2}$	42
2654.847	1	*WA*	37655.746	$13515°_{3\,1/2}-51171_{3\,1/2}$	9	2678.618	3	*WA*	37321.595		
2656.440	6	*WA*	37633.166	$11454_{6\,1/2}-49087°_{7\,1/2}$	−12	2678.946	5	*WA*	37317.026		
2656.587	2	*WA*	37631.084	$8531_{3\,1/2}-46162°_{4\,1/2}$	70	2679.827	3	*WA*	37304.758	$11325°_{2\,1/2}-48630_{1\,1/2}$	76
2656.844	25	*WA*	37627.444	$10703_{4\,1/2}-48330°_{3\,1/2}$	−40	2680.425	3	*WA*	37296.436	$7341_{5\,1/2}-44637°_{6\,1/2}$	−104
2657.789	4	*WA*	37614.066	$4844°_{1\,1/2}-42458_{1\,1/2}$	−32	2681.659	5	*WA*	37279.275		
2658.383	5	*WA*	37605.662	$12762°_{4\,1/2}-50368_{3\,1/2}$	−41	2682.351	3	*WA*	37269.658	$11387°_{3\,1/2}-48657_{3\,1/2}$	53
2659.603	2	*WA*	37588.413	$0°_{3\,1/2}-37588_{3\,1/2}$	−59	2682.727	50	*WA*	37264.435	$3593°_{4\,1/2}-40858_{4\,1/2}$	112
2659.716	5	*WA*	37586.816	$8278_{5\,1/2}-45864°_{5\,1/2}$	−79	2683.057	4	*WA*	37259.851	$2595°_{1\,1/2}-39855_{0\,1/2}$	101

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2683.166	3	*WA*	37258.338			2711.244	5	*WA*	36872.507	$10114°_{2\,1/2}-46987_{1\,1/2}$	23
2683.963	3	*WA*	37247.275			2711.935	3	*WA*	36863.112		
2684.244	4	*WA*	37243.376			2712.372	4	*WA*	36857.174		
2684.418	3	*WA*	37240.962			2712.693	3	*WA*	36852.813		
2684.697	4	*WA*	37237.092	$4511°_{2\,1/2}-41748_{1\,1/2}$	70	2712.976	5	*WA*	36848.969		
2685.038	5	*MT*	37232.363	$0°_{3\,1/2}-37232_{1\,1/2}$	−74	2713.058	1	*WA*	36847.855	$10641°_{2\,1/2}-47489_{3\,1/2}$	17
2685.428	4	*WA*	37226.956	$10924°_{4\,1/2}-48151_{4\,1/2}$	93	2713.295	4	*WA*	36844.637		
2685.480	1	*WA*	37226.235	$10798°_{2\,1/2}-48024_{2\,1/2}$	116	2714.723	6	*WA*	36825.257		
2685.774	3	*WA*	37222.161			2714.975	3	*WA*	36821.838		
2686.333	4	*WA*	37214.415	$10274°_{3\,1/2}-47489_{3\,1/2}$	107	2715.170	60	*WA*	36819.194		
2686.766	4	*WA*	37208.418	$9778°_{2\,1/2}-46987_{1\,1/2}$	37	2715.243	30	*WA*	36818.204		
2687.621	4	*WA*	37196.582			2715.314	4	*WA*	36817.242		
2687.988	25	*WA*	37191.504	$10274°_{3\,1/2}-47466_{2\,1/2}$	30	2715.426	5	*WA*	36815.723		
2688.160	4	*WA*	37189.124	$4844°_{1\,1/2}-42033_{2\,1/2}$	116	2715.746	6	*WA*	36811.385		
2689.176	3	*WA*	37175.075			2715.903	3	*WA*	36809.258		
2689.483	4	*WA*	37170.831			2716.146	3	*WA*	36805.965		
2690.652	1	*WA*	37154.683	$3703°_{3\,1/2}-40858_{4\,1/2}$	72	2716.463	3	*WA*	36801.670		
2690.979	5	*WA*	37150.168	$987°_{4\,1/2}-38137_{5\,1/2}$	97	2716.775	2	*WA*	36797.444	$2140°_{0\,1/2}-38937_{1\,1/2}$	124
2691.219	5	*WA*	37146.855	$987°_{4\,1/2}-38134_{4\,1/2}$	67	2717.275	30	*WA*	36790.673		
2691.687	25	*WA*	37140.397	$11949°_{3\,1/2}-49089_{2\,1/2}$	100	2718.087	3	*WA*	36779.683		
2692.013	5	*WA*	37135.899			2718.295	2	*WA*	36776.869	$7818°_{1\,1/2}-44594_{2\,1/2}$	88
2693.027	6	*WA*	37121.917	$6521°_{1\,1/2}-43643_{0\,1/2}$	20	2718.338	3	*WA*	36776.287		
2693.447	7	*WA*	37116.129	$10314_{4\,1/2}-47430°_{3\,1/2}$	108	2719.117	2	*WA*	36765.751	$3745°_{1\,1/2}-40511_{1\,1/2}$	100
2695.215	10	*WA*	37091.783			2719.237	5	*WA*	36764.129	$11387°_{3\,1/2}-48151_{4\,1/2}$	121
2695.961	50	*WA*	37081.520	$4910°_{5\,1/2}-41992_{6\,1/2}$	127	2719.345	3	*WA*	36762.669	$8131_{4\,1/2}-44893°_{3\,1/2}$	−52
2696.080	100	*PK*	37079.885	$3593°_{4\,1/2}-40673_{5\,1/2}$	192	2719.979	30	*WA*	36754.100	$5819°_{4\,1/2}-42573_{3\,1/2}$	23
2697.031	3	*WA*	37066.809			2720.124	4	*WA*	36752.141		
2698.033	3	*WA*	37053.045			2721.132	5	*WA*	36738.528	$4459°_{3\,1/2}-41198_{2\,1/2}$	91
2698.359	6	*WA*	37048.568			2721.990	5	*WA*	36726.948	$10703_{4\,1/2}-47430°_{3\,1/2}$	70
2699.528	4	*WA*	37032.526			2722.197	3	*WA*	36724.155	$1410°_{4\,1/2}-38134_{4\,1/2}$	60
2700.231	5	*WA*	37022.885	$5010°_{2\,1/2}-42033_{2\,1/2}$	102	2722.757	2	*WA*	36716.603	$7878°_{3\,1/2}-44594_{2\,1/2}$	3
2700.471	5	*WA*	37019.594	$7061°_{0\,1/2}-44081_{1\,1/2}$	58	2723.309	10	*MT*	36709.161		
2700.682	3	*WA*	37016.702			2723.381	100	*WA*	36708.190	$11949°_{3\,1/2}-48657_{3\,1/2}$	44
2700.974	1	*WA*	37012.701	$2382°_{4\,1/2}-39394_{3\,1/2}$	−45	2723.888	3	*WA*	36701.358	$7722_{2\,1/2}-44423°_{1\,1/2}$	69
2701.012	3	*WA*	37012.180	$10454°_{1\,1/2}-47466_{2\,1/2}$	8	2724.071	3	*WA*	36698.893	$11325°_{2\,1/2}-48024_{2\,1/2}$	0
2701.101	2	*WA*	37010.961	$4737°_{2\,1/2}-41748_{1\,1/2}$	55	2724.679	1	*WA*	36690.704	$10798°_{2\,1/2}-47489_{3\,1/2}$	−20
2701.703	5	*WA*	37002.714	$3508°_{0\,1/2}-40511_{1\,1/2}$	58	2724.751	3	*WA*	36689.734	$14481°_{2\,1/2}-51171_{3\,1/2}$	74
2702.539	6	*WA*	36991.268			2724.948	30	*WA*	36687.082	$4511°_{2\,1/2}-41198_{2\,1/2}$	31
2702.879	4	*WA*	36986.616			2725.170	6	*WA*	36684.094	$11340°_{3\,1/2}-48024_{2\,1/2}$	17
2703.138	7	*WA*	36983.072			2725.325	4	*WA*	36682.007	$8448_{2\,1/2}-45130°_{2\,1/2}$	120
2703.495	3	*WA*	36978.189			2726.144	6	*WA*	36670.988	$8278_{5\,1/2}-44949°_{4\,1/2}$	31
2706.336	3	*WA*	36939.372			2726.371	4	*WA*	36667.935	$1873°_{3\,1/2}-38541_{4\,1/2}$	−3
2706.879	100	*WA*	36931.963	$4266°_{3\,1/2}-41198_{2\,1/2}$	51	2727.685	5	*WA*	36650.272	$6517°_{2\,1/2}-43167_{1\,1/2}$	11
2707.024	4	*WA*	36929.985			2727.960	5	*WA*	36646.577	$6521°_{1\,1/2}-43167_{1\,1/2}$	30
2707.470	3	*WA*	36923.902	$0°_{3\,1/2}-36923_{4\,1/2}$	113	2728.485	4	*WA*	36639.527	$10820_{2\,1/2}-47459°_{2\,1/2}$	119
2708.131	30	*WA*	36914.890	$5118°_{2\,1/2}-42033_{2\,1/2}$	41	2729.162	25	*WA*	36630.438	$5942°_{3\,1/2}-42573_{3\,1/2}$	46
2708.435	5	*WA*	36910.747	$6549°_{2\,1/2}-43460_{2\,1/2}$	122	2729.238	1	*WA*	36629.418	$5118°_{2\,1/2}-41748_{1\,1/2}$	−54
2708.953	6	*WA*	36903.689	$4844°_{1\,1/2}-41748_{1\,1/2}$	54	2729.538	4	*WA*	36625.392	$4459°_{3\,1/2}-41085_{3\,1/2}$	51
2709.406	30	*WA*	36897.519	$5675°_{4\,1/2}-42573_{3\,1/2}$	92	2729.683	5	*WA*	36623.447	$4459°_{3\,1/2}-41083_{4\,1/2}$	26
2711.011	6	*WA*	36875.676	$4322°_{2\,1/2}-41198_{2\,1/2}$	76	2730.076	5	*WA*	36618.175		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
2730.699	8	*WA*	36609.821	$10820_{2\,1/2} - 47430°_{3\,1/2}$	124	2760.960	3	*WA*	36208.587	$987°_{4\,1/2} - 37196_{4\,1/2}$	60
2730.800	12	*WA*	36608.468	$5964°_{3\,1/2} - 42573_{3\,1/2}$	173	2761.415	120	*MT*	36202.621	$8448_{2\,1/2} - 44651°_{1\,1/2}$	−40
2731.358	4	*WA*	36600.989			2761.501	6	*WA*	36201.494	$7259°_{3\,1/2} - 43460_{2\,1/2}$	36
2731.407	2	*WA*	36600.333	$12057°_{2\,1/2} - 48657_{3\,1/2}$	104	2761.672	4	*WA*	36199.253		
2731.707	5	*WA*	36596.313	$5437°_{3\,1/2} - 42033_{2\,1/2}$	83	2761.757	4	*WA*	36198.139	$2634°_{2\,1/2} - 38832_{2\,1/2}$	96
2732.035	25	*WA*	36591.920	$4266°_{3\,1/2} - 40858_{4\,1/2}$	112	2762.206	70	*WA*	36192.255	$8402°_{3\,1/2} - 44594_{2\,1/2}$	−4
2732.166	40	*WA*	36590.165			2762.462	1	*WA*	36188.901	$10798°_{2\,1/2} - 46987_{1\,1/2}$	85
2732.404	3	*WA*	36586.978			2762.890	30	*WA*	36183.296	$6389°_{4\,1/2} - 42573_{3\,1/2}$	47
2732.827	50	*MT*	36581.316	$7061°_{0\,1/2} - 43643_{0\,1/2}$	−75	2763.210	3	*WA*	36179.105		
2733.363	3	*WA*	36574.142			2763.722	3	*WA*	36172.403	$4910°_{5\,1/2} - 41083_{4\,1/2}$	73
2733.933	3	*WA*	36566.518			2764.037	1	*WA*	36168.281	$3703°_{3\,1/2} - 39871_{4\,1/2}$	43
2734.077	5	*WA*	36564.592			2764.142	3	*WA*	36166.907		
2734.154	1	*WA*	36563.562	$1410°_{4\,1/2} - 37973_{3\,1/2}$	96	2764.397	5	*WA*	36163.571	$11325°_{2\,1/2} - 47489_{3\,1/2}$	73
2735.562	1	*WA*	36544.744	$9053_{3\,1/2} - 45598°_{3\,1/2}$	72	2764.696	4	*WA*	36159.661	$2382°_{4\,1/2} - 38541_{4\,1/2}$	34
2736.326	30	*MT*	36534.541	$5924°_{1\,1/2} - 42458_{1\,1/2}$	2	2765.385	5	*WA*	36150.651	$4523°_{4\,1/2} - 40673_{5\,1/2}$	110
2736.665	2	*WA*	36530.015	$10058_{6\,1/2} - 46588°_{5\,1/2}$	111	2765.534	5	*WA*	36148.704	$11340°_{3\,1/2} - 47489_{3\,1/2}$	22
2740.577	6	*WA*	36477.874			2766.381	4	*WA*	36137.636	$0°_{3\,1/2} - 36137_{2\,1/2}$	33
2741.197	1	*WA*	36469.624	$4203°_{6\,1/2} - 40673_{5\,1/2}$	−16	2766.588	3	*WA*	36134.933	$3703°_{3\,1/2} - 39838_{2\,1/2}$	83
2741.521	5	*WA*	36465.314	$5283°_{0\,1/2} - 41748_{1\,1/2}$	64	2767.007	30	*MT*	36129.462	$2140°_{0\,1/2} - 38269_{0\,1/2}$	−19
2741.957	90	*WA*	36459.516			2767.671	1	*WA*	36120.794	$7522°_{0\,1/2} - 43643_{0\,1/2}$	23
2742.465	3	*WA*	36452.763	$12097_{3\,1/2} - 48549°_{4\,1/2}$	49	2768.337	6	*WA*	36112.104	$0°_{3\,1/2} - 36112_{3\,1/2}$	84
2744.540	5	*WA*	36425.204	$8169°_{1\,1/2} - 44594_{2\,1/2}$	−25	2768.522	5	*WA*	36109.691		
2745.007	5	*WA*	36419.008	$8175°_{2\,1/2} - 44594_{2\,1/2}$	−56	2769.275	4	*WA*	36099.873	$1873°_{3\,1/2} - 37973_{3\,1/2}$	32
2745.723	60	*WA*	36409.511	$11742°_{5\,1/2} - 48151_{4\,1/2}$	18	2769.995	1	*WA*	36090.491	$13527_{4\,1/2} - 49617°_{5\,1/2}$	30
2746.562	2	*WA*	36398.389	$4459°_{3\,1/2} - 40858_{4\,1/2}$	57	2770.613	3	*WA*	36082.441	$14481°_{2\,1/2} - 50564_{2\,1/2}$	67
2746.654	6	*WA*	36397.171	$12260°_{3\,1/2} - 48657_{3\,1/2}$	−76	2770.993	2	*WA*	36077.493	$13012°_{2\,1/2} - 49089_{2\,1/2}$	102
2748.021	4	*WA*	36379.066	$4910°_{5\,1/2} - 41289_{5\,1/2}$	58	2771.148	8	*WA*	36075.475	$11949°_{3\,1/2} - 48024_{2\,1/2}$	−10
2749.705	3	*WA*	36356.787			2771.660	1	*WA*	36068.811	$5964°_{3\,1/2} - 42033_{2\,1/2}$	53
2749.954	3	*WA*	36353.495			2772.326	5	*WA*	36060.147	$13027_{6\,1/2} - 49087°_{7\,1/2}$	25
2750.451	4	*WA*	36346.927	$3508°_{0\,1/2} - 39855_{0\,1/2}$	−1	2772.927	4	*WA*	36052.332	$8896_{5\,1/2} - 44949°_{4\,1/2}$	50
2750.894	80	*WA*	36341.074	$5651°_{5\,1/2} - 41992_{6\,1/2}$	75	2773.022	4	*WA*	36051.096	$10646_{5\,1/2} - 46697°_{4\,1/2}$	83
2751.334	1	*WA*	36335.263	$7746°_{2\,1/2} - 44081_{1\,1/2}$	73	2774.516	1	*WA*	36031.685	$3363°_{2\,1/2} - 39394_{3\,1/2}$	123
2752.679	3	*WA*	36317.510	$5716°_{3\,1/2} - 42033_{2\,1/2}$	71	2775.158	8	*WA*	36023.350	$5969°_{5\,1/2} - 41992_{6\,1/2}$	2
2752.945	4	*WA*	36314.000	$8280°_{2\,1/2} - 44594_{2\,1/2}$	19	2776.961	3	*WA*	35999.962	$4511°_{2\,1/2} - 40511_{1\,1/2}$	93
2753.073	5	*WA*	36312.312	$2140°_{0\,1/2} - 38452_{1\,1/2}$	55	2778.537	1	*WA*	35979.544	$11007°_{1\,1/2} - 46987_{1\,1/2}$	−24
2753.210	3	*WA*	36310.505			2778.887	2	*WA*	35975.013	$8448_{2\,1/2} - 44423°_{1\,1/2}$	79
2753.302	4	*WA*	36309.292	$4201°_{1\,1/2} - 40511_{1\,1/2}$	59	2779.464	4	*WA*	35967.545	$12057°_{2\,1/2} - 48024_{2\,1/2}$	−22
2753.541	4	*WA*	36306.141	$5283°_{0\,1/2} - 41589_{0\,1/2}$	35	2779.825	4	*WA*	35962.874		
2753.764	2	*WA*	36303.201	$2634°_{2\,1/2} - 38937_{1\,1/2}$	51	2780.000	40	*WA*	35960.610	$2581°_{4\,1/2} - 38541_{4\,1/2}$	−5
2754.232	4	*WA*	36297.033			2781.032	7	*WA*	35947.267	$4910°_{5\,1/2} - 40858_{4\,1/2}$	25
2754.653	1	*WA*	36291.486	$12365°_{4\,1/2} - 48657_{3\,1/2}$	−43	2781.431	6	*WA*	35942.110	$10646_{5\,1/2} - 46588°_{5\,1/2}$	50
2755.082	3	*WA*	36285.835			2781.797	2	*WA*	35937.382	$6521°_{1\,1/2} - 42458_{1\,1/2}$	−28
2755.413	6	*WA*	36281.476	$9316_{3\,1/2} - 45598°_{3\,1/2}$	88	2781.894	30	*WA*	35936.128	$987°_{4\,1/2} - 36923_{4\,1/2}$	−49
2755.681	2	*WA*	36277.948	$3593°_{4\,1/2} - 39871_{4\,1/2}$	−2	2781.986	30	*WA*	35934.940	$6638°_{4\,1/2} - 42573_{3\,1/2}$	8
2755.962	3	*WA*	36274.249			2782.101	2	*WA*	35933.455	$2595°_{1\,1/2} - 38529_{2\,1/2}$	79
2756.086	4	*WA*	36272.617	$7061°_{0\,1/2} - 43334_{0\,1/2}$	123	2782.699	3	*WA*	35925.733	$0°_{3\,1/2} - 35925_{3\,1/2}$	52
2756.798	30	*WA*	36263.249	$7818°_{1\,1/2} - 44081_{1\,1/2}$	22	2783.786	5	*WA*	35911.706	$8169°_{1\,1/2} - 44081_{1\,1/2}$	29
2758.790	1	*WA*	36237.066	$2595°_{1\,1/2} - 38832_{2\,1/2}$	2	2784.007	3	*WA*	35908.855	$6549°_{2\,1/2} - 42458_{1\,1/2}$	21
2759.054	4	*WA*	36233.600	$12097_{3\,1/2} - 48330°_{3\,1/2}$	86	2784.271	100	*MT*	35905.451	$8175°_{2\,1/2} - 44081_{1\,1/2}$	−60
2760.271	5	*WA*	36217.625			2784.664	3	*WA*	35900.383	$2641°_{3\,1/2} - 38541_{4\,1/2}$	70

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2785.049	2	*WA*	35895.421	$9053_{3\,1/2}-44949°_{4\,1/2}$	39	2811.457	2	*WA*	35558.272	$12466°_{1\,1/2}-48024_{2\,1/2}$	28
2785.125	5	*WA*	35894.441	$2634°_{2\,1/2}-38529_{2\,1/2}$	87	2811.859	25	*WA*	35553.189	$2581°_{4\,1/2}-38134_{4\,1/2}$	46
2785.347	80	*MT*	35891.581	$12260°_{3\,1/2}-48151_{4\,1/2}$	−69	2812.893	8	*WA*	35540.121	$11949°_{3\,1/2}-47489_{3\,1/2}$	30
2785.664	1	*WA*	35887.497	$2641°_{3\,1/2}-38529_{2\,1/2}$	35	2814.777	30	*WA*	35516.334		
2786.520	2	*WA*	35876.473	$3995°_{3\,1/2}-39871_{4\,1/2}$	100	2814.811	40	*MT*	35515.905		
2786.688	3	*WA*	35874.310			2814.951	50	*WA*	35514.139	$7059°_{4\,1/2}-42573_{3\,1/2}$	20
2787.650	3	*WA*	35861.931	$8789_{2\,1/2}-44651°_{1\,1/2}$	8	2814.997	4	*WA*	35513.558	$1410°_{4\,1/2}-36923_{4\,1/2}$	74
2788.022	3	*WA*	35857.146	$2595°_{1\,1/2}-38452_{1\,1/2}$	40	2816.052	3	*WA*	35500.254	$5010°_{2\,1/2}-40511_{1\,1/2}$	−2
2788.689	7	*WA*	35848.570	$10314_{4\,1/2}-46162°_{4\,1/2}$	41	2816.629	3	*WA*	35492.982		
2789.328	2	*WA*	35840.358	$9053_{3\,1/2}-44893°_{3\,1/2}$	48	2817.364	4	*WA*	35483.723	$6549°_{2\,1/2}-42033_{2\,1/2}$	−23
2790.517	80	*WA*	35825.088	$7818°_{1\,1/2}-43643_{0\,1/2}$	5	2817.490	50	*WA*	35482.137	$5716°_{3\,1/2}-41198_{2\,1/2}$	44
2790.593	3	*WA*	35824.112	$5924°_{1\,1/2}-41748_{1\,1/2}$	38	2818.029	2	*WA*	35475.350	$2140°_{0\,1/2}-37615_{0\,1/2}$	109
2791.053	2	*WA*	35818.208	$2634°_{2\,1/2}-38452_{1\,1/2}$	124	2818.173	4	*WA*	35473.538	$8169°_{1\,1/2}-43643_{0\,1/2}$	6
2791.408	110	*WA*	35813.653	$9316_{3\,1/2}-45130°_{2\,1/2}$	37	2818.376	6	*WA*	35470.983	$5819°_{4\,1/2}-41289_{5\,1/2}$	125
2791.787	3	*WA*	35808.792			2819.253	4	*WA*	35459.949		
2791.876	2	*WA*	35807.650	$0°_{3\,1/2}-35807_{4\,1/2}$	82	2820.060	3	*WA*	35449.802		
2792.380	4	*WA*	35801.187	$3593°_{4\,1/2}-39394_{3\,1/2}$	80	2820.744	5	*WA*	35441.207		
2792.439	5	*WA*	35800.431	$8280°_{2\,1/2}-44081_{1\,1/2}$	3	2820.858	4	*WA*	35439.774		
2792.884	4	*WA*	35794.727			2821.473	6	*WA*	35432.050	$13117_{4\,1/2}-48549°_{4\,1/2}$	−17
2793.568	5	*WA*	35785.963	$12365°_{4\,1/2}-48151_{4\,1/2}$	31	2821.682	5	*WA*	35429.425	$3508°_{0\,1/2}-38937_{1\,1/2}$	84
2794.519	2	*WA*	35773.785	$4737°_{2\,1/2}-40511_{1\,1/2}$	32	2822.366	5	*WA*	35420.840	$5437°_{3\,1/2}-40858_{4\,1/2}$	57
2795.236	3	*WA*	35764.610	$12260°_{3\,1/2}-48024_{2\,1/2}$	23	2822.548	3	*WA*	35418.556		
2795.384	3	*WA*	35762.716	$4910°_{5\,1/2}-40673_{5\,1/2}$	105	2823.421	6	*WA*	35407.605	$5675°_{4\,1/2}-41083_{4\,1/2}$	74
2795.945	3	*WA*	35755.541	$2382°_{4\,1/2}-38137_{5\,1/2}$	105	2823.629	3	*WA*	35404.997		
2796.206	2	*WA*	35752.204	$2382°_{4\,1/2}-38134_{4\,1/2}$	50	2824.030	7	*WA*	35399.970	$12751°_{5\,1/2}-48151_{4\,1/2}$	13
2797.627	5	*WA*	35734.045			2824.276	1	*WA*	35396.886	$7061°_{0\,1/2}-42458_{1\,1/2}$	−18
2799.155	5	*WA*	35714.540	$1873°_{3\,1/2}-37588_{3\,1/2}$	1	2824.629	4	*WA*	35392.463	$2581°_{4\,1/2}-37973_{3\,1/2}$	−55
2800.963	1	*WA*	35691.487	$3703°_{3\,1/2}-39394_{3\,1/2}$	92	2824.880	7	*WA*	35389.318	$2581°_{4\,1/2}-37970_{5\,1/2}$	44
2801.196	4	*WA*	35688.519			2825.296	3	*WA*	35384.108	$3508°_{0\,1/2}-38892_{0\,1/2}$	77
2801.485	3	*WA*	35684.837			2825.715	4	*WA*	35378.861	$8702°_{1\,1/2}-44081_{1\,1/2}$	−69
2801.747	3	*WA*	35681.500	$11015_{3\,1/2}-46697°_{4\,1/2}$	−4	2826.499	5	*WA*	35369.049	$5716°_{3\,1/2}-41085_{3\,1/2}$	51
2803.042	35	*WA*	35665.016	$5924°_{1\,1/2}-41589_{0\,1/2}$	101	2826.647	3	*WA*	35367.197	$5716°_{3\,1/2}-41083_{4\,1/2}$	119
2803.121	3	*WA*	35664.011	$2140°_{0\,1/2}-37804_{1\,1/2}$	70	2828.039	8	*WA*	35349.789	$7818°_{1\,1/2}-43167_{1\,1/2}$	57
2803.256	1	*WA*	35662.294	$2879°_{5\,1/2}-38541_{4\,1/2}$	116	2828.703	5	*WA*	35341.492	$14276_{5\,1/2}-49617°_{5\,1/2}$	90
2803.943	5	*WA*	35653.557	$4201°_{1\,1/2}-39855_{0\,1/2}$	51	2829.247	4	*WA*	35334.697		
2804.389	5	*WA*	35647.887	$5437°_{3\,1/2}-41085_{3\,1/2}$	101	2829.556	5	*WA*	35330.838	$13758°_{1\,1/2}-49089_{2\,1/2}$	23
2804.590	2	*WA*	35645.332	$13012°_{2\,1/2}-48657_{3\,1/2}$	92	2829.618	4	*WA*	35330.064		
				$7522°_{0\,1/2}-43167_{1\,1/2}$	−87	2830.244	2	*WA*	35322.250	$1873°_{3\,1/2}-37196_{4\,1/2}$	46
2804.814	3	*WA*	35642.485	$7818°_{1\,1/2}-43460_{2\,1/2}$	100	2830.341	4	*WA*	35321.040	$5969°_{5\,1/2}-41289_{5\,1/2}$	76
2805.113	4	*WA*	35638.686	$5651°_{5\,1/2}-41289_{5\,1/2}$	73	2830.895	220	*WA*	35314.128	$7259°_{3\,1/2}-42573_{3\,1/2}$	13
2805.457	4	*WA*	35634.317	$8789_{2\,1/2}-44423°_{1\,1/2}$	122	2831.647	4	*WA*	35304.750	$13784°_{1\,1/2}-49089_{2\,1/2}$	98
2805.624	3	*WA*	35632.196	$9316_{3\,1/2}-44949°_{4\,1/2}$	97	2832.568	3	*WA*	35293.271	$10869_{4\,1/2}-46162°_{4\,1/2}$	121
2806.711	5	*WA*	35618.397	$13012°_{2\,1/2}-48630_{1\,1/2}$	35	2832.928	3	*WA*	35288.786		
2807.038	6	*WA*	35614.248	$5675°_{4\,1/2}-41289_{5\,1/2}$	40	2833.274	80	*WA*	35284.477		
2807.674	5	*WA*	35606.180	$15565°_{2\,1/2}-51171_{3\,1/2}$	10	2833.580	3	*WA*	35280.667		
2808.360	4	*WA*	35597.484			2834.099	3	*WA*	35274.207	$5924°_{1\,1/2}-41198_{2\,1/2}$	102
2808.823	3	*WA*	35591.616	$2382°_{4\,1/2}-37973_{3\,1/2}$	91	2834.744	6	*WA*	35266.181	$5819°_{4\,1/2}-41085_{3\,1/2}$	87
2809.560	8	*MT*	35582.280	$7878°_{3\,1/2}-43460_{2\,1/2}$	76	2834.902	4	*WA*	35264.215	$5819°_{4\,1/2}-41083_{4\,1/2}$	35
2810.177	30	*WA*	35574.468	$2563°_{5\,1/2}-38137_{5\,1/2}$	19	2835.393	3	*WA*	35258.109	$2879°_{5\,1/2}-38137_{5\,1/2}$	123
2811.419	5	*WA*	35558.753	$0°_{3\,1/2}-35558_{3\,1/2}$	51	2835.601	35	*WA*	35255.523	$5942°_{3\,1/2}-41198_{2\,1/2}$	13

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
2837.598	6	*WA*	35230.713	$6517°_{2\,1/2}-41748_{1\,1/2}$	53	2856.307	1	*WA*	34999.960	$12466°_{1\,1/2}-47466_{2\,1/2}$	−54
2837.896	14	*WA*	35227.013	$6521°_{1\,1/2}-41748_{1\,1/2}$	67	2856.394	6	*WA*	34998.894	$15565°_{2\,1/2}-50564_{2\,1/2}$	11
2838.004	10	*PK*	35225.673	$0°_{3\,1/2}-35225_{2\,1/2}$	17	2856.473	5	*WA*	34997.926	$13659°_{4\,1/2}-48657_{3\,1/2}$	−80
2838.810	4	*WA*	35215.672	$3593°_{4\,1/2}-38809_{3\,1/2}$	78	2856.674	3	*WA*	34995.464	$10869_{4\,1/2}-45864°_{5\,1/2}$	55
2838.857	2	*MT*	35215.089			2856.831	4	*WA*	34993.541		
2838.945	4	*WA*	35213.997	$2634°_{2\,1/2}-37848_{2\,1/2}$	114	2856.937	5	*WA*	34992.242	$14625_{5\,1/2}-49617°_{5\,1/2}$	46
2839.030	4	*WA*	35212.943	$13117_{4\,1/2}-48330°_{3\,1/2}$	76	2856.976	4	*WA*	34991.765	$14276_{5\,1/2}-49267°_{4\,1/2}$	82
2839.364	30	*MT*	35208.801	$2595°_{1\,1/2}-37804_{1\,1/2}$	12	2858.009	60	*WA*	34979.118	$16192°_{4\,1/2}-51171_{3\,1/2}$	−6
2839.523	4	*WA*	35206.830	$5651°_{5\,1/2}-40858_{4\,1/2}$	−17	2858.472	4	*WA*	34973.453	$12456_{3\,1/2}-47430°_{3\,1/2}$	15
2839.561	5	*WA*	35206.359	$12260°_{3\,1/2}-47466_{2\,1/2}$	2	2858.716	3	*WA*	34970.468	$1873°_{3\,1/2}-36844_{2\,1/2}$	97
2840.205	3	*WA*	35198.376	$6549°_{2\,1/2}-41748_{1\,1/2}$	6	2859.062	6	*WA*	34966.236		
2840.686	5	*WA*	35192.416	$3745°_{1\,1/2}-38937_{1\,1/2}$	80	2859.516	30	*WA*	34960.685	$9634°_{1\,1/2}-44594_{2\,1/2}$	−56
2841.486	6	*WA*	35182.509	$5675°_{4\,1/2}-40858_{4\,1/2}$	67	2860.555	4	*WA*	34947.987	$3593°_{4\,1/2}-38541_{4\,1/2}$	−3
2841.719	18	*PK*	35179.624	$8280°_{2\,1/2}-43460_{2\,1/2}$	38	2860.643	3	*WA*	34946.912	$2641°_{3\,1/2}-37588_{3\,1/2}$	−1
2842.075	3	*WA*	35175.218			2860.864	4	*WA*	34944.213	$3508°_{0\,1/2}-38452_{1\,1/2}$	−66
2842.513	25	*WA*	35169.798	$2634°_{2\,1/2}-37804_{1\,1/2}$	31	2861.169	5	*WA*	34940.487		
2842.830	18	*WA*	35165.877			2861.345	18	*WA*	34938.338	$2140°_{0\,1/2}-37078_{1\,1/2}$	−48
2842.924	3	*WA*	35164.714	$8169°_{1\,1/2}-43334_{0\,1/2}$	80	2861.621	35	*WA*	34934.969	$2595°_{1\,1/2}-37530_{1\,1/2}$	−19
2844.311	6	*WA*	35147.567			2862.785	40	*MT*	34920.765	$0°_{3\,1/2}-34920_{3\,1/2}$	−22
2844.727	4	*WA*	35142.427	$5942°_{3\,1/2}-41085_{3\,1/2}$	12	2863.225	4	*WA*	34915.399	$5942°_{3\,1/2}-40858_{4\,1/2}$	−7
2844.760	3	*WA*	35142.020	$5716°_{3\,1/2}-40858_{4\,1/2}$	31	2864.484	5	*WA*	34900.053	$6389°_{4\,1/2}-41289_{5\,1/2}$	25
2844.805	1	*WA*	35141.464	$13515°_{3\,1/2}-48657_{3\,1/2}$	−18	2864.819	4	*WA*	34895.973	$2634°_{2\,1/2}-37530_{1\,1/2}$	6
2844.882	4	*WA*	35140.513	$5942°_{3\,1/2}-41083_{4\,1/2}$	17	2864.894	3	*WA*	34895.059	$10703_{4\,1/2}-45598°_{3\,1/2}$	64
2845.357	4	*WA*	35134.647			2865.378	7	*WA*	34889.165	$5969°_{5\,1/2}-40858_{4\,1/2}$	−32
2845.452	30	*WA*	35133.474	$11454_{6\,1/2}-46588°_{5\,1/2}$	44	2865.513	8	*WA*	34887.522		
2845.751	8	*WA*	35129.782	$11458_{5\,1/2}-46588°_{5\,1/2}$	5	2865.563	3	*WA*	34886.913	$8280°_{2\,1/2}-43167_{1\,1/2}$	−20
2845.805	3	*WA*	35129.116	$3703°_{3\,1/2}-38832_{2\,1/2}$	1	2866.057	5	*WA*	34880.900	$14387_{4\,1/2}-49267°_{4\,1/2}$	30
2846.265	5	*WA*	35123.439	$12365°_{4\,1/2}-47489_{3\,1/2}$	−34	2866.809	30	*WA*	34871.751	$13758°_{1\,1/2}-48630_{1\,1/2}$	−35
2846.363	4	*WA*	35122.229			2867.273	4	*WA*	34866.108		
2846.513	1	*WA*	35120.379	$5964°_{3\,1/2}-41085_{3\,1/2}$	61	2867.766	1	*WA*	34860.114	$7713°_{4\,1/2}-42573_{3\,1/2}$	13
2847.005	3	*WA*	35114.310	$5969°_{5\,1/2}-41083_{4\,1/2}$	23	2868.230	6	*WA*	34854.475	$5819°_{4\,1/2}-40673_{5\,1/2}$	14
2847.124	4	*WA*	35112.842	$13217_{3\,1/2}-48330°_{3\,1/2}$	29	2868.960	7	*WA*	34845.607	$13784°_{1\,1/2}-48630_{1\,1/2}$	−15
2847.236	6	*WA*	35111.461			2869.559	3	*WA*	34838.334	$3703°_{3\,1/2}-38541_{4\,1/2}$	55
2847.689	3	*WA*	35105.876	$3703°_{3\,1/2}-38809_{3\,1/2}$	−5	2869.647	4	*WA*	34837.265	$3995°_{3\,1/2}-38832_{2\,1/2}$	17
2848.079	4	*WA*	35101.069	$4737°_{2\,1/2}-39838_{2\,1/2}$	−2	2870.150	1	*WA*	34831.160	$7202°_{2\,1/2}-42033_{2\,1/2}$	35
2848.819	3	*WA*	35091.952	$2140°_{0\,1/2}-37232_{1\,1/2}$	6	2870.500	3	*WA*	34826.913	$7746°_{2\,1/2}-42573_{3\,1/2}$	−92
2848.909	3	*WA*	35090.843	$2879°_{5\,1/2}-37970_{5\,1/2}$	7	2870.624	7	*WA*	34825.409	$3703°_{3\,1/2}-38529_{2\,1/2}$	−17
2849.033	35	*WA*	35089.316	$3363°_{2\,1/2}-38452_{1\,1/2}$	−6	2871.073	35	*WA*	34819.963	$987°_{4\,1/2}-35807_{4\,1/2}$	7
2849.198	4	*WA*	35087.284	$3745°_{1\,1/2}-38832_{2\,1/2}$	51	2871.401	1	*WA*	34815.986	$9778°_{2\,1/2}-44594_{2\,1/2}$	44
2850.784	1	*WA*	35067.765	$6521°_{1\,1/2}-41589_{0\,1/2}$	−37	2871.573	6	*PK*	34813.901	$2382°_{4\,1/2}-37196_{4\,1/2}$	8
2851.598	4	*WA*	35057.755	$8402°_{3\,1/2}-43460_{2\,1/2}$	−109	2871.633	20	*WA*	34813.173	$0°_{3\,1/2}-34813_{2\,1/2}$	−28
2851.700	3	*WA*	35056.501	$2595°_{1\,1/2}-37652_{2\,1/2}$	54	2871.763	1	*WA*	34811.597	$9269°_{0\,1/2}-44081_{1\,1/2}$	49
2852.237	3	*WA*	35049.901	$1873°_{3\,1/2}-36923_{4\,1/2}$	47	2872.435	3	*WA*	34803.454	$13527_{4\,1/2}-48330°_{3\,1/2}$	−96
2854.491	5	*WA*	35022.226	$5651°_{5\,1/2}-40673_{5\,1/2}$	8	2872.481	5	*WA*	34802.896	$15565°_{2\,1/2}-50368_{3\,1/2}$	−28
2854.667	70	*MT*	35020.067	$2595°_{1\,1/2}-37615_{0\,1/2}$	−22	2873.354	3	*WA*	34792.323	$1410°_{4\,1/2}-36202_{4\,1/2}$	70
2854.880	70	*WA*	35017.454	$2634°_{2\,1/2}-37652_{2\,1/2}$	29	2874.135	200	*WA*	34782.869		
2855.321	35	*MT*	35012.046	$16159°_{3\,1/2}-51171_{3\,1/2}$	−8	2874.551	4	*WA*	34777.836	$10820_{2\,1/2}-45598°_{3\,1/2}$	21
2855.443	35	*WA*	35010.550	$2641°_{3\,1/2}-37652_{2\,1/2}$	19	2874.821	4	*WA*	34774.570	$7259°_{3\,1/2}-42033_{2\,1/2}$	−9
2855.718	35	*WA*	35007.179	$2581°_{4\,1/2}-37588_{3\,1/2}$	−36	2874.917	4	*WA*	34773.408		
2856.046	5	*WA*	35003.159	$12456_{3\,1/2}-47459°_{2\,1/2}$	11	2875.899	1	*WA*	34761.535	$3508°_{0\,1/2}-38269_{0\,1/2}$	32

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2876.183	3	*WA*	34758.103	$8702°_{1\,1/2}-43460_{2\,1/2}$	15	2899.089	3	*WA*	34483.488		
2877.120	2	*WA*	34746.784	$2595°_{1\,1/2}-37342_{2\,1/2}$	101	2899.446	5	*WA*	34479.243		
2878.018	3	*WA*	34735.942	$4201°_{1\,1/2}-38937_{1\,1/2}$	20	2899.620	4	*WA*	34477.174	$13012°_{2\,1/2}-47489_{3\,1/2}$	−10
2878.635	6	*WA*	34728.497	$987°_{4\,1/2}-35716_{5\,1/2}$	26	2900.368	6	*WA*	34468.282	$6389°_{4\,1/2}-40858_{4\,1/2}$	20
2878.786	4	*WA*	34726.676	$12762°_{4\,1/2}-47489_{3\,1/2}$	37	2900.606	5	*WA*	34465.455	$8702°_{1\,1/2}-43167_{1\,1/2}$	19
2879.366	3	*WA*	34719.681	$5118°_{2\,1/2}-39838_{2\,1/2}$	43	2901.545	4	*WA*	34454.301	$13012°_{2\,1/2}-47466_{2\,1/2}$	−48
2879.949	2	*WA*	34712.653	$7746°_{2\,1/2}-42458_{1\,1/2}$	96	2901.708	3	*WA*	34452.366	$14097_{3\,1/2}-48549°_{4\,1/2}$	70
2880.356	5	*WA*	34707.749	$2634°_{2\,1/2}-37342_{2\,1/2}$	88	2902.147	7	*WA*	34447.155	$9634°_{1\,1/2}-44081_{1\,1/2}$	−33
2880.637	60	*MT*	34704.363	$11458_{5\,1/2}-46162°_{4\,1/2}$	24	2902.323	4	*WA*	34445.066	$6638°_{4\,1/2}-41083_{4\,1/2}$	30
2880.849	2	*WA*	34701.809	$1410°_{4\,1/2}-36112_{3\,1/2}$	93	2902.385	3	*WA*	34444.330	$2634°_{2\,1/2}-37078_{1\,1/2}$	117
2880.928	3	*WA*	34700.857	$2641°_{3\,1/2}-37342_{2\,1/2}$	90	2902.664	5	*WA*	34441.019	$3363°_{2\,1/2}-37804_{1\,1/2}$	13
2881.129	30	*WA*	34698.437	$7293°_{6\,1/2}-41992_{6\,1/2}$	19	2902.715	4	*WA*	34440.414	$14827_{3\,1/2}-49267°_{4\,1/2}$	56
2881.393	3	*WA*	34695.258	$6389°_{4\,1/2}-41085_{3\,1/2}$	−13	2903.519	3	*WA*	34430.878	$3703°_{3\,1/2}-38134_{4\,1/2}$	72
2881.420	4	*WA*	34694.933	$7878°_{3\,1/2}-42573_{3\,1/2}$	70	2903.746	3	*WA*	34428.186		
2881.772	3	*WA*	34690.695	$4201°_{1\,1/2}-38892_{0\,1/2}$	87	2905.250	3	*WA*	34410.364	$11454_{6\,1/2}-45864°_{5\,1/2}$	116
2882.605	60	*WA*	34680.671	$6517°_{2\,1/2}-41198_{2\,1/2}$	−18	2905.849	2	*WA*	34403.272	$11759_{5\,1/2}-46162°_{4\,1/2}$	47
2882.909	2	*WA*	34677.014	$6521°_{1\,1/2}-41198_{2\,1/2}$	37	2906.032	4	*WA*	34401.105	$5437°_{3\,1/2}-39838_{2\,1/2}$	83
2884.729	4	*WA*	34655.137	$13675_{2\,1/2}-48330°_{3\,1/2}$	69	2906.088	5	*WA*	34400.443		
2885.010	5	*WA*	34651.762	$6638°_{4\,1/2}-41289_{5\,1/2}$	49	2907.462	3	*WA*	34384.186	$5010°_{2\,1/2}-39394_{3\,1/2}$	64
2885.289	40	*WA*	34648.411	$6549°_{2\,1/2}-41198_{2\,1/2}$	11	2907.524	3	*WA*	34383.453		
2885.932	2	*WA*	34640.691	$7818°_{1\,1/2}-42458_{1\,1/2}$	96	2907.819	4	*WA*	34379.965	$3593°_{4\,1/2}-37973_{3\,1/2}$	71
2886.332	3	*MT*	34635.891	$13515°_{3\,1/2}-48151_{4\,1/2}$	6	2908.097	4	*WA*	34376.679	$3593°_{4\,1/2}-37970_{5\,1/2}$	29
2888.074	3	*WA*	34615.001	$2581°_{4\,1/2}-37196_{4\,1/2}$	121	2908.419	90	*PK*	34372.873	$4459°_{3\,1/2}-38832_{2\,1/2}$	36
				$4322°_{2\,1/2}-38937_{1\,1/2}$	−102	2909.452	1	*WA*	34360.669	$2563°_{5\,1/2}-36923_{4\,1/2}$	114
2888.456	7	*WA*	34610.423	$3363°_{2\,1/2}-37973_{3\,1/2}$	75	2909.614	5	*WA*	34358.756	$987°_{4\,1/2}-35346_{3\,1/2}$	86
2888.693	35	*WA*	34607.584	$14481°_{2\,1/2}-49089_{2\,1/2}$	28	2910.385	3	*WA*	34349.654	$4459°_{3\,1/2}-38809_{3\,1/2}$	51
2890.173	30	*WA*	34589.863	$9491°_{0\,1/2}-44081_{1\,1/2}$	−18	2910.852	4	*WA*	34344.144	$3793°_{6\,1/2}-38137_{5\,1/2}$	97
2890.409	2	*WA*	34587.039	$5924°_{1\,1/2}-40511_{1\,1/2}$	116	2911.120	4	*WA*	34340.982		
2891.636	3	*WA*	34572.363	$5283°_{0\,1/2}-39855_{0\,1/2}$	−6	2911.514	6	*WA*	34336.335		
2891.728	5	*WA*	34571.263			2912.287	2	*WA*	34327.222	$4201°_{1\,1/2}-38529_{2\,1/2}$	95
2892.032	14	*WA*	34567.630	$6517°_{2\,1/2}-41085_{3\,1/2}$	35	2912.769	10	*WA*	34321.542	$4511°_{2\,1/2}-38832_{2\,1/2}$	90
2892.140	14	*WA*	34566.339	$4266°_{3\,1/2}-38832_{2\,1/2}$	27	2912.903	25	*WA*	34319.963	$10274°_{3\,1/2}-44594_{2\,1/2}$	7
2893.863	2	*WA*	34545.759	$7202°_{2\,1/2}-41748_{1\,1/2}$	9	2913.195	5	*WA*	34316.523	$2879°_{5\,1/2}-37196_{4\,1/2}$	82
2894.019	6	*WA*	34543.897	$3593°_{4\,1/2}-38137_{5\,1/2}$	97	2913.362	7	*WA*	34314.556	$14315°_{0\,1/2}-48630_{1\,1/2}$	32
2894.086	40	*WA*	34543.097	$4266°_{3\,1/2}-38809_{3\,1/2}$	19	2913.528	8	*WA*	34312.601	$2581°_{4\,1/2}-36893_{3\,1/2}$	89
2894.216	50	*MT*	34541.545	$2382°_{4\,1/2}-36923_{4\,1/2}$	3	2913.738	5	*WA*	34310.128	$7278°_{1\,1/2}-41589_{0\,1/2}$	−69
2894.296	5	*WA*	34540.591	$3593°_{4\,1/2}-38134_{4\,1/2}$	73					$10820_{2\,1/2}-45130°_{2\,1/2}$	86
2894.732	4	*WA*	34535.389	$6549°_{2\,1/2}-41085_{3\,1/2}$	89	2914.105	3	*WA*	34305.807	$8423_{6\,1/2}-42729°_{5\,1/2}$	33
2894.881	5	*WA*	34533.611	$3995°_{3\,1/2}-38529_{2\,1/2}$	50					$1410°_{4\,1/2}-35716_{5\,1/2}$	29
2895.526	2	*WA*	34525.919	$5513_{5\,1/2}-40039°_{6\,1/2}$	104	2914.347	9	*WA*	34302.959	$10646_{5\,1/2}-44949°_{4\,1/2}$	19
2895.639	6	*WA*	34524.571	$3745°_{1\,1/2}-38269_{0\,1/2}$	73	2914.747	4	*WA*	34298.252	$4511°_{2\,1/2}-38809_{3\,1/2}$	33
2895.949	5	*WA*	34520.876	$12466°_{1\,1/2}-46987_{1\,1/2}$	−61	2914.933	2	*WA*	34296.063	$3508°_{0\,1/2}-37804_{1\,1/2}$	100
2896.404	8	*MT*	34515.453	$1410°_{4\,1/2}-35925_{3\,1/2}$	76	2915.252	4	*WA*	34292.311	$8280°_{2\,1/2}-42573_{3\,1/2}$	66
2896.733	70	*MT*	34511.533	$2382°_{4\,1/2}-36893_{3\,1/2}$	10	2915.408	3	*WA*	34290.476		
2896.862	5	*WA*	34509.997	$4322°_{2\,1/2}-38832_{2\,1/2}$	−3	2915.555	25	*WA*	34288.747	$3363°_{2\,1/2}-37652_{2\,1/2}$	83
2896.962	1	*WA*	34508.805	$13515°_{3\,1/2}-48024_{2\,1/2}$	−16	2915.747	4	*WA*	34286.489	$4523°_{4\,1/2}-38809_{3\,1/2}$	46
2897.172	4	*WA*	34506.304	$10088°_{1\,1/2}-44594_{2\,1/2}$	17	2916.046	2	*WA*	34282.974	$8175°_{2\,1/2}-42458_{1\,1/2}$	94
2898.336	7	*WA*	34492.447	$13659°_{4\,1/2}-48151_{4\,1/2}$	37	2916.682	35	*WA*	34275.498	$4266°_{3\,1/2}-38541_{4\,1/2}$	23
2898.944	6	*WA*	34485.213	$3363°_{2\,1/2}-37848_{2\,1/2}$	90	2916.826	2	*WA*	34273.806	$14276_{5\,1/2}-48549°_{4\,1/2}$	115
2899.073	4	*WA*	34483.679	$15134_{4\,1/2}-49617°_{5\,1/2}$	29	2917.127	4	*WA*	34270.270	$3703°_{3\,1/2}-37973_{3\,1/2}$	94

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2917.491	5	*WA*	34265.994	$13758°_{1\,1/2}-48024_{2\,1/2}$	−10	2938.220	7	*WA*	34024.260	$7059°_{4\,1/2}-41083_{4\,1/2}$	39
2917.686	4	*WA*	34263.704	$1873°_{3\,1/2}-36137_{2\,1/2}$	35	2938.317	4	*WA*	34023.137	$13436_{2\,1/2}-47459°_{2\,1/2}$	102
2918.663	80	*WA*	34252.236	$2641°_{3\,1/2}-36893_{3\,1/2}$	25	2938.682	5	*WA*	34018.911	$4523°_{4\,1/2}-38541_{4\,1/2}$	72
2918.781	20	*WA*	34250.851	$4201°_{1\,1/2}-38452_{1\,1/2}$	−5	2939.538	30	*MT*	34009.006	$9634°_{1\,1/2}-43643_{0\,1/2}$	−37
2919.213	2	*WA*	34245.783	$10703_{4\,1/2}-44949°_{4\,1/2}$	77	2940.138	1	*WA*	34002.066	$7746°_{2\,1/2}-41748_{1\,1/2}$	−27
2919.539	1	*WA*	34241.959	$13217_{3\,1/2}-47459°_{2\,1/2}$	41	2940.663	7	*WA*	33995.996	$7293°_{6\,1/2}-41289_{5\,1/2}$	−36
2919.715	3	*WA*	34239.895	$13784°_{1\,1/2}-48024_{2\,1/2}$	54	2940.777	35	*WA*	33994.678	$3593°_{4\,1/2}-37588_{3\,1/2}$	87
2919.858	15	*WA*	34238.218			2940.877	6	*WA*	33993.522	$6517°_{2\,1/2}-40511_{1\,1/2}$	14
2920.292	5	*WA*	34233.130	$14097_{3\,1/2}-48330°_{3\,1/2}$	34	2941.197	5	*WA*	33989.824	$6521°_{1\,1/2}-40511_{1\,1/2}$	29
2920.482	10	*WA*	34230.903	$7059°_{4\,1/2}-41289_{5\,1/2}$	4	2942.132	3	*WA*	33979.022	$3363°_{2\,1/2}-37342_{2\,1/2}$	123
2920.926	3	*WA*	34225.700	$7522°_{0\,1/2}-41748_{1\,1/2}$	−120	2942.452	1	*WA*	33975.327	$13012°_{2\,1/2}-46987_{1\,1/2}$	54
2920.977	2	*WA*	34225.102	$3363°_{2\,1/2}-37588_{3\,1/2}$	57	2943.215	8	*WA*	33966.520	$10114°_{2\,1/2}-44081_{1\,1/2}$	28
2921.371	6	*WA*	34220.486	$5651°_{5\,1/2}-39871_{4\,1/2}$	11	2943.673	10	*WA*	33961.235	$6549°_{2\,1/2}-40511_{1\,1/2}$	16
2921.421	6	*WA*	34219.901	$6638°_{4\,1/2}-40858_{4\,1/2}$	−45	2943.987	7	*WA*	33957.613	$5437°_{3\,1/2}-39394_{3\,1/2}$	42
2922.080	10	*WA*	34212.184	$13217_{3\,1/2}-47430°_{3\,1/2}$	−23	2944.346	50	*WA*	33953.473	$10641°_{2\,1/2}-44594_{2\,1/2}$	−12
2922.244	3	*WA*	34210.264			2944.773	4	*WA*	33948.549	$3703°_{3\,1/2}-37652_{2\,1/2}$	53
2922.291	3	*WA*	34209.714	$2634°_{2\,1/2}-36844_{2\,1/2}$	75	2945.385	5	*WA*	33941.496	$4511°_{2\,1/2}-38452_{1\,1/2}$	3
2922.367	30	*WA*	34208.824	$16159°_{3\,1/2}-50368_{3\,1/2}$	15	2945.582	4	*WA*	33939.226	$7259°_{3\,1/2}-41198_{2\,1/2}$	−7
2922.581	20	*MT*	34206.319	$4322°_{2\,1/2}-38529_{2\,1/2}$	7	2945.856	3	*WA*	33936.070	$1410°_{4\,1/2}-35346_{3\,1/2}$	92
2922.880	5	*WA*	34202.820	$2641°_{3\,1/2}-36844_{2\,1/2}$	75	2946.056	8	*WA*	33933.766	$4203°_{6\,1/2}-38137_{5\,1/2}$	18
2923.076	3	*WA*	34200.527	$4737°_{2\,1/2}-38937_{1\,1/2}$	88	2946.101	3	*WA*	33933.248	$987°_{4\,1/2}-34920_{3\,1/2}$	71
2923.455	9	*WA*	34196.093	$5675°_{4\,1/2}-39871_{4\,1/2}$	24	2946.276	4	*WA*	33931.232	$5924°_{1\,1/2}-39855_{0\,1/2}$	37
2923.834	6	*WA*	34191.661	$13268_{2\,1/2}-47459°_{2\,1/2}$	−14	2946.373	9	*WA*	33930.115	$7818°_{1\,1/2}-41748_{1\,1/2}$	−16
2925.016	3	*WA*	34177.845	$8280°_{2\,1/2}-42458_{1\,1/2}$	48	2946.859	5	*WA*	33924.519	$14625_{5\,1/2}-48549°_{4\,1/2}$	33
2925.094	3	*WA*	34176.933	$3793°_{6\,1/2}-37970_{5\,1/2}$	36	2947.149	4	*WA*	33921.182	$2595°_{1\,1/2}-36516_{1\,1/2}$	28
2925.185	60	*MT*	34175.870	$16192°_{4\,1/2}-50368_{3\,1/2}$	−8	2947.304	2	*WA*	33919.398	$7278°_{1\,1/2}-41198_{2\,1/2}$	11
2925.641	8	*WA*	34170.544	$8402°_{3\,1/2}-42573_{3\,1/2}$	21	2947.742	4	*WA*	33914.358	$5924°_{1\,1/2}-39838_{2\,1/2}$	117
2925.925	8	*WA*	34167.227	$3363°_{2\,1/2}-37530_{1\,1/2}$	22	2948.385	8	*WA*	33906.962	$5964°_{3\,1/2}-39871_{4\,1/2}$	25
2926.293	3	*WA*	34162.930	$14387_{4\,1/2}-48549°_{4\,1/2}$	53	2948.735	5	*WA*	33902.938	$13527_{4\,1/2}-47430°_{3\,1/2}$	−6
2926.928	3	*WA*	34155.519	$5716°_{3\,1/2}-39871_{4\,1/2}$	−97	2948.857	9	*WA*	33901.535		
2927.249	5	*WA*	34151.774	$9491°_{0\,1/2}-43643_{0\,1/2}$	37	2949.195	3	*WA*	33897.650		
2927.548	5	*WA*	34148.286	$1410°_{4\,1/2}-35558_{3\,1/2}$	−111	2949.364	2	*WA*	33895.708	$5942°_{3\,1/2}-39838_{2\,1/2}$	61
				$2140°_{0\,1/2}-36288_{0\,1/2}$	117	2950.304	40	*WA*	33884.908	$3703°_{3\,1/2}-37588_{3\,1/2}$	30
2927.833	2	*WA*	34144.962	$3703°_{3\,1/2}-37848_{2\,1/2}$	6	2950.498	4	*WA*	33882.681	$7202°_{2\,1/2}-41085_{3\,1/2}$	−3
2927.864	4	*WA*	34144.601			2950.545	3	*WA*	33882.141	$2634°_{2\,1/2}-36516_{1\,1/2}$	9
2928.209	3	*WA*	34140.578	$10454°_{1\,1/2}-44594_{2\,1/2}$	−77	2951.291	10	*WA*	33873.577	$5964°_{3\,1/2}-39838_{2\,1/2}$	28
2928.874	4	*WA*	34132.827			2951.489	7	*WA*	33871.305	$17300°_{3\,1/2}-51171_{3\,1/2}$	24
2929.109	25	*WA*	34130.088	$4322°_{2\,1/2}-38452_{1\,1/2}$	47	2951.687	5	*WA*	33869.032	$3363°_{2\,1/2}-37232_{1\,1/2}$	22
2932.090	5	*WA*	34095.390	$4737°_{2\,1/2}-38832_{2\,1/2}$	55	2951.777	5	*WA*	33868.000	$4266°_{3\,1/2}-38134_{4\,1/2}$	−2
2932.274	10	*WA*	34093.251	$4844°_{1\,1/2}-38937_{1\,1/2}$	84	2952.124	3	*WA*	33864.019	$8169°_{1\,1/2}-42033_{2\,1/2}$	63
2932.459	3	*WA*	34091.100	$6967_{6\,1/2}-41058°_{7\,1/2}$	34	2952.667	1	*WA*	33857.792	$8175°_{2\,1/2}-42033_{2\,1/2}$	0
2933.529	6	*WA*	34078.666	$14252_{3\,1/2}-48330°_{3\,1/2}$	55	2953.076	5	*WA*	33853.103	$3995°_{3\,1/2}-37848_{2\,1/2}$	13
2934.088	3	*WA*	34072.174	$4737°_{2\,1/2}-38809_{3\,1/2}$	71	2954.409	4	*WA*	33837.829		
2934.345	20	*WA*	34069.190	$4459°_{3\,1/2}-38529_{2\,1/2}$	41	2955.100	5	*WA*	33829.917	$13659°_{4\,1/2}-47489_{3\,1/2}$	−33
2934.667	2	*WA*	34065.452	$12097_{3\,1/2}-46162°_{4\,1/2}$	36	2955.412	6	*WA*	33826.346	$9634°_{1\,1/2}-43460_{2\,1/2}$	0
2934.740	2	*WA*	34064.604	$9269°_{0\,1/2}-43334_{0\,1/2}$	99	2955.601	35	*WA*	33824.183	$7259°_{3\,1/2}-41083_{4\,1/2}$	−35
2935.757	4	*WA*	34052.804	$5819°_{4\,1/2}-39871_{4\,1/2}$	85	2955.807	6	*WA*	33821.825	$5010°_{2\,1/2}-38832_{2\,1/2}$	−13
2936.183	10	*WA*	34047.864	$4844°_{1\,1/2}-38892_{0\,1/2}$	8	2955.941	100	*MT*	33820.292	$2382°_{4\,1/2}-36202_{4\,1/2}$	−18
2937.257	1	*WA*	34035.415	$6638°_{4\,1/2}-40673_{5\,1/2}$	99	2956.707	25	*MT*	33811.531	$0°_{3\,1/2}-33811_{4\,1/2}$	−35
2938.051	7	*WA*	34026.217	$7059°_{4\,1/2}-41085_{3\,1/2}$	82	2956.987	3	*WA*	33808.329	$0°_{3\,1/2}-33808_{2\,1/2}$	13

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
2957.165	6	*WA*	33806.294	$15281_{6\,1/2}-49087°_{7\,1/2}$	17	2982.541	3	*WA*	33518.677	$1410°_{4\,1/2}-34928_{4\,1/2}$	12
2957.792	4	*WA*	33799.129	$7059°_{4\,1/2}-40858_{4\,1/2}$	−3	2982.966	4	*WA*	33513.902	$4459°_{3\,1/2}-37973_{3\,1/2}$	−1
2957.841	3	*WA*	33798.569	$5010°_{2\,1/2}-38809_{3\,1/2}$	−36	2983.271	1	*WA*	33510.476	$1410°_{4\,1/2}-34920_{3\,1/2}$	−7
2958.038	5	*WA*	33796.318	$10798°_{2\,1/2}-44594_{2\,1/2}$	−54	2983.918	10	*WA*	33503.210	$14827_{3\,1/2}-48330°_{3\,1/2}$	43
2958.440	3	*WA*	33791.726	$4737°_{2\,1/2}-38529_{2\,1/2}$	78	2984.106	4	*WA*	33501.099	$12097_{3\,1/2}-45598°_{3\,1/2}$	75
2959.105	40	*MT*	33784.132	$13675_{2\,1/2}-47459°_{2\,1/2}$	−39	2984.556	40	*WA*	33496.048	$2641°_{3\,1/2}-36137_{2\,1/2}$	3
2960.438	15	*WA*	33768.921	$8804°_{4\,1/2}-42573_{3\,1/2}$	−45	2984.713	6	*WA*	33494.287	$15593_{6\,1/2}-49087°_{7\,1/2}$	67
2960.640	6	*WA*	33766.617	$4203°_{6\,1/2}-37970_{5\,1/2}$	19	2984.866	4	*WA*	33492.570	$3703°_{3\,1/2}-37196_{4\,1/2}$	25
2961.367	4	*WA*	33758.327	$15859_{4\,1/2}-49617°_{5\,1/2}$	−9	2985.032	4	*WA*	33490.707	$11458_{5\,1/2}-44949°_{4\,1/2}$	49
2964.526	4	*WA*	33722.356	$14827_{3\,1/2}-48549°_{4\,1/2}$	−10	2985.818	50	*MT*	33481.891	$6389°_{4\,1/2}-39871_{4\,1/2}$	1
2964.801	90	*MT*	33719.228	$5675°_{4\,1/2}-39394_{3\,1/2}$	−1	2985.907	30	*WA*	33480.893	$3363°_{2\,1/2}-36844_{2\,1/2}$	16
2965.133	8	*WA*	33715.453	$3363°_{2\,1/2}-37078_{1\,1/2}$	2	2986.668	20	*WA*	33472.363	$1873°_{3\,1/2}-35346_{3\,1/2}$	15
2965.269	70	*WA*	33713.907	$5118°_{2\,1/2}-38832_{2\,1/2}$	4	2987.120	3	*WA*	33467.298	$8280°_{2\,1/2}-41748_{1\,1/2}$	−34
2965.837	7	*WA*	33707.450	$4266°_{3\,1/2}-37973_{3\,1/2}$	72	2987.351	10	*WA*	33464.710	$15803_{4\,1/2}-49267°_{4\,1/2}$	39
2966.123	3	*WA*	33704.201			2987.543	4	*WA*	33462.560	$5616_{4\,1/2}-39079°_{5\,1/2}$	1
										$4511°_{2\,1/2}-37973_{3\,1/2}$	41
2966.478	3	*WA*	33700.167	$9634°_{1\,1/2}-43334_{0\,1/2}$	20						
2966.798	6	*WA*	33696.532	$17475°_{4\,1/2}-51171_{3\,1/2}$	−35	2988.638	1	*WA*	33450.300	$4201°_{1\,1/2}-37652_{2\,1/2}$	102
2967.107	10	*WA*	33693.023	$2595°_{1\,1/2}-36288_{0\,1/2}$	9	2988.878	5	*WA*	33447.614	$4523°_{4\,1/2}-37970_{5\,1/2}$	115
2967.315	4	*WA*	33690.662	$5118°_{2\,1/2}-38809_{3\,1/2}$	−7	2989.019	2	*WA*	33446.036	$15822_{3\,1/2}-49267°_{4\,1/2}$	113
2967.866	4	*WA*	33684.407	$4844°_{1\,1/2}-38529_{2\,1/2}$	31	2989.313	3	*WA*	33442.747		
2968.119	3	*WA*	33681.536	$9778°_{2\,1/2}-43460_{2\,1/2}$	−10	2989.566	10	*WA*	33439.917	$10641°_{2\,1/2}-44081_{1\,1/2}$	−15
2968.362	6	*WA*	33678.779	$5716°_{3\,1/2}-39394_{3\,1/2}$	2					$7233°_{5\,1/2}-40673_{5\,1/2}$	−30
2968.582	1	*WA*	33676.283	$9491°_{0\,1/2}-43167_{1\,1/2}$	−101	2990.435	3	*WA*	33430.200	$5964°_{3\,1/2}-39394_{3\,1/2}$	106
2968.735	2	*WA*	33674.548	$4459°_{3\,1/2}-38134_{4\,1/2}$	20	2990.872	200	*AK*	33425.316	$2382°_{4\,1/2}-35807_{4\,1/2}$	−5
2970.315	35	*WA*	33656.636	$3995°_{3\,1/2}-37652_{2\,1/2}$	5	2991.400	4	*WA*	33419.416	$8169°_{1\,1/2}-41589_{0\,1/2}$	−20
2971.196	4	*WA*	33646.657	$4201°_{1\,1/2}-37848_{2\,1/2}$	0	2991.709	30	*WA*	33415.965	$15134_{4\,1/2}-48549°_{4\,1/2}$	25
2971.840	2	*WA*	33639.366	$2563°_{5\,1/2}-36202_{4\,1/2}$	42	2991.898	20	*MT*	33413.854	$4201°_{1\,1/2}-37615_{0\,1/2}$	13
2972.583	80	*WA*	33630.958	$8402°_{3\,1/2}-42033_{2\,1/2}$	−28	2992.223	10	*WA*	33410.225	$5118°_{2\,1/2}-38529_{2\,1/2}$	10
2973.436	10	*WA*	33621.310	$2581°_{4\,1/2}-36202_{4\,1/2}$	11	2992.366	8	*WA*	33408.628	$15859_{4\,1/2}-49267°_{4\,1/2}$	9
2974.018	8	*WA*	33614.731	$4523°_{4\,1/2}-38137_{5\,1/2}$	83	2993.404	1	*WA*	33397.044	$10684°_{0\,1/2}-44081_{1\,1/2}$	110
2974.315	1	*WA*	33611.375	$4523°_{4\,1/2}-38134_{4\,1/2}$	8	2994.137	7	*WA*	33388.868	$9778°_{2\,1/2}-43167_{1\,1/2}$	−25
2974.482	40	*MT*	33609.488	$5283°_{0\,1/2}-38892_{0\,1/2}$	16	2994.418	90	*WA*	33385.735	$4266°_{3\,1/2}-37652_{2\,1/2}$	41
2974.605	40	*MT*	33608.098	$4844°_{1\,1/2}-38452_{1\,1/2}$	−7	2994.955	2	*WA*	33379.749	$7293°_{6\,1/2}-40673_{5\,1/2}$	112
2975.115	2	*WA*	33602.337	$3593°_{4\,1/2}-37196_{4\,1/2}$	83	2995.047	1	*WA*	33378.724	$7722_{2\,1/2}-41100°_{2\,1/2}$	77
2975.402	5	*WA*	33599.096	$7259°_{3\,1/2}-40858_{4\,1/2}$	−33	2995.387	3	*WA*	33374.935	$9198°_{3\,1/2}-42573_{3\,1/2}$	71
2975.601	5	*WA*	33596.849	$3745°_{1\,1/2}-37342_{2\,1/2}$	−2	2995.641	260	*WA*	33372.106	$7713°_{4\,1/2}-41085_{3\,1/2}$	−18
2975.939	20	*MT*	33593.033	$3995°_{3\,1/2}-37588_{3\,1/2}$	21					$5437°_{3\,1/2}-38809_{3\,1/2}$	52
2976.107	3	*WA*	33591.137	$14739_{2\,1/2}-48330°_{3\,1/2}$	109	2997.468	8	*WA*	33351.766	$1873°_{3\,1/2}-35225_{2\,1/2}$	44
2976.900	320	*WA*	33582.190	$4266°_{3\,1/2}-37848_{2\,1/2}$	37	2997.715	4	*WA*	33349.018		
2977.461	120	*MT*	33575.862	$5819°_{4\,1/2}-39394_{3\,1/2}$	−17	2997.901	3	*WA*	33346.949	$3995°_{3\,1/2}-37342_{2\,1/2}$	82
2977.548	8	*WA*	33574.881			2998.014	5	*WA*	33345.692	$10114°_{2\,1/2}-43460_{2\,1/2}$	42
2977.769	6	*WA*	33572.389	$8175°_{2\,1/2}-41748_{1\,1/2}$	−26	2998.769	40	*MT*	33337.297	$4511°_{2\,1/2}-37848_{2\,1/2}$	4
2977.941	4	*WA*	33570.451	$3508°_{0\,1/2}-37078_{1\,1/2}$	42	2998.921	3	*WA*	33335.607	$7522°_{5\,1/2}-40858_{4\,1/2}$	24
2978.810	4	*WA*	33560.658	$7522°_{5\,1/2}-41083_{4\,1/2}$	−14	2999.066	10	*MT*	33333.995	$5118°_{2\,1/2}-38452_{1\,1/2}$	52
2979.356	3	*WA*	33554.508	$10088°_{1\,1/2}-43643_{0\,1/2}$	−81	2999.317	2	*WA*	33331.206	$8702°_{1\,1/2}-42033_{2\,1/2}$	−4
2979.521	1	*WA*	33552.650	$0°_{3\,1/2}-33552_{2\,1/2}$	68	2999.432	18	*WA*	33329.928	$3593°_{4\,1/2}-36923_{4\,1/2}$	21
2980.410	100	*WA*	33542.642	$14481°_{2\,1/2}-48024_{2\,1/2}$	−102	2999.480	18	*WA*	33329.395	$4322°_{2\,1/2}-37652_{2\,1/2}$	12
2981.211	3	*WA*	33533.630	$9634°_{1\,1/2}-43167_{1\,1/2}$	−63	3000.068	60	*MT*	33322.863	$2879°_{5\,1/2}-36202_{4\,1/2}$	1
2981.395	3	*WA*	33531.561			3000.132	4	*WA*	33322.152	$4266°_{3\,1/2}-37588_{3\,1/2}$	76
2981.902	70	*WA*	33525.859	$4322°_{2\,1/2}-37848_{2\,1/2}$	18	3000.330	6	*WA*	33319.953	$7878°_{3\,1/2}-41198_{2\,1/2}$	−27

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3000.597	4	*WA*	33316.988			3024.377	2	*WA*	33055.035	$1873°_{3\frac{1}{2}}-34928_{4\frac{1}{2}}$	0
3002.134	130	*WA*	33299.931	$3593°_{4\frac{1}{2}}-36893_{3\frac{1}{2}}$	44	3024.571	30	*MT*	33052.915	$10114°_{2\frac{1}{2}}-43167_{1\frac{1}{2}}$	−79
3002.376	6	*WA*	33297.247			3025.126	8	*WA*	33046.851	$1873°_{3\frac{1}{2}}-34920_{3\frac{1}{2}}$	−2
3002.744	150	*WA*	33293.167	$4511°_{2\frac{1}{2}}-37804_{1\frac{1}{2}}$	−9	3025.227	4	*WA*	33045.748	$8702°_{1\frac{1}{2}}-41748_{1\frac{1}{2}}$	−86
3003.155	1	*WA*	33288.611	$6549°_{2\frac{1}{2}}-39838_{2\frac{1}{2}}$	74	3025.298	4	*WA*	33044.972	$0°_{3\frac{1}{2}}-33045_{2\frac{1}{2}}$	−122
3003.561	100	*PK*	33284.111	$2641°_{3\frac{1}{2}}-35925_{3\frac{1}{2}}$	−11	3026.619	30	*PK*	33030.550	$4201°_{1\frac{1}{2}}-37232_{1\frac{1}{2}}$	5
3003.680	3	*WA*	33282.793	$10798°_{2\frac{1}{2}}-44081_{1\frac{1}{2}}$	−26	3026.807	1	*WA*	33028.499	$8169°_{1\frac{1}{2}}-41198_{2\frac{1}{2}}$	−111
3005.213	3	*WA*	33265.816	$4322°_{2\frac{1}{2}}-37588_{3\frac{1}{2}}$	51	3027.162	2	*WA*	33024.626	$18147°_{2\frac{1}{2}}-51171_{3\frac{1}{2}}$	40
3007.032	5	*WA*	33245.693	$10088°_{1\frac{1}{2}}-43334_{0\frac{1}{2}}$	0	3027.368	2	*WA*	33022.378	$8175°_{2\frac{1}{2}}-41198_{2\frac{1}{2}}$	−67
3008.131	70	*WA*	33233.548	$6638°_{4\frac{1}{2}}-39871_{4\frac{1}{2}}$	−26	3027.621	20	*PK*	33019.619	$4322°_{2\frac{1}{2}}-37342_{2\frac{1}{2}}$	0
3008.584	3	*WA*	33228.544			3028.171	5	*WA*	33013.622	$5924°_{1\frac{1}{2}}-38937_{1\frac{1}{2}}$	10
3008.785	320	*WA*	33226.324	$2581°_{4\frac{1}{2}}-35807_{4\frac{1}{2}}$	13	3028.664	4	*WA*	33008.248	$3508°_{0\frac{1}{2}}-36516_{1\frac{1}{2}}$	−79
3009.770	3	*WA*	33215.451			3028.753	6	*WA*	33007.279	$14481°_{2\frac{1}{2}}-47489_{3\frac{1}{2}}$	−70
3010.456	9	*PK*	33207.882	$4322°_{2\frac{1}{2}}-37530_{1\frac{1}{2}}$	−42	3028.958	50	*MT*	33005.044	$6389°_{4\frac{1}{2}}-39394_{3\frac{1}{2}}$	−6
3010.549	6	*WA*	33206.856	$7878°_{3\frac{1}{2}}-41085_{3\frac{1}{2}}$	−29	3030.309	140	*WA*	32990.331	$5819°_{4\frac{1}{2}}-38809_{3\frac{1}{2}}$	−31
3010.724	3	*WA*	33204.926	$7878°_{3\frac{1}{2}}-41083_{4\frac{1}{2}}$	−39	3030.471	5	*WA*	32988.567	$7522°_{0\frac{1}{2}}-40511_{1\frac{1}{2}}$	−101
3011.471	2	*WA*	33196.690	$15134_{4\frac{1}{2}}-48330°_{3\frac{1}{2}}$	−49	3030.621	6	*WA*	32986.934	$5283°_{0\frac{1}{2}}-38269_{0\frac{1}{2}}$	−10
3011.877	40	*PK*	33192.216	$4459°_{3\frac{1}{2}}-37652_{2\frac{1}{2}}$	−2	3030.858	5	*WA*	32984.355		
3012.061	2	*WA*	33190.188	$3703°_{3\frac{1}{2}}-36893_{3\frac{1}{2}}$	12	3031.497	5	*WA*	32977.403	$2581°_{4\frac{1}{2}}-35558_{3\frac{1}{2}}$	−41
3012.180	3	*WA*	33188.877	$9269°_{0\frac{1}{2}}-42458_{1\frac{1}{2}}$	−39	3032.334	10	*WA*	32968.301	$5924°_{1\frac{1}{2}}-38892_{0\frac{1}{2}}$	4
3012.484	6	*WA*	33185.528	$10274°_{3\frac{1}{2}}-43460_{2\frac{1}{2}}$	−33	3032.727	30	*MT*	32964.028	$2382°_{4\frac{1}{2}}-35346_{3\frac{1}{2}}$	−7
3013.170	10	*WA*	33177.973	$14252_{3\frac{1}{2}}-47430°_{3\frac{1}{2}}$	−32	3033.050	10	*MT*	32960.518	$7713°_{4\frac{1}{2}}-40673_{5\frac{1}{2}}$	32
3013.311	1	*WA*	33176.420	$2382°_{4\frac{1}{2}}-35558_{3\frac{1}{2}}$	−35	3033.125	60	*WA*	32959.703	$4844°_{1\frac{1}{2}}-37804_{1\frac{1}{2}}$	−86
3013.923	1	*WA*	33169.684	$5283°_{0\frac{1}{2}}-38452_{1\frac{1}{2}}$	−36	3034.301	4	*WA*	32946.930		
3014.105	7	*WA*	33167.681	$987°_{4\frac{1}{2}}-34155_{3\frac{1}{2}}$	−18	3035.008	8	*WA*	32939.255	$1873°_{3\frac{1}{2}}-34813_{2\frac{1}{2}}$	−12
3014.257	12	*PK*	33166.009	$2641°_{3\frac{1}{2}}-35807_{4\frac{1}{2}}$	0	3035.863	12	*MT*	32929.978	$16159°_{3\frac{1}{2}}-49089_{2\frac{1}{2}}$	29
3014.470	5	*WA*	33163.665			3036.018	3	*WA*	32928.297	$3995°_{3\frac{1}{2}}-36923_{4\frac{1}{2}}$	−31
3015.414	10	*WA*	33153.283	$3363°_{2\frac{1}{2}}-36516_{1\frac{1}{2}}$	−87	3036.059	1	*WA*	32927.853	$2879°_{5\frac{1}{2}}-35807_{4\frac{1}{2}}$	−19
3016.479	2	*WA*	33141.579	$12456_{3\frac{1}{2}}-45598°_{3\frac{1}{2}}$	24	3037.049	10	*WA*	32917.119	$2641°_{3\frac{1}{2}}-35558_{3\frac{1}{2}}$	−23
3016.556	3	*WA*	33140.733	$3703°_{3\frac{1}{2}}-36844_{2\frac{1}{2}}$	22	3037.274	8	*WA*	32914.681	$4737°_{2\frac{1}{2}}-37652_{2\frac{1}{2}}$	−36
3017.096	12	*WA*	33134.802	$2581°_{4\frac{1}{2}}-35716_{5\frac{1}{2}}$	−23	3037.728	170	*AK*	32909.762	$4322°_{2\frac{1}{2}}-37232_{1\frac{1}{2}}$	32
3017.195	300	*MT*	33133.714	$5675°_{4\frac{1}{2}}-38809_{3\frac{1}{2}}$	2	3038.785	2	*WA*	32898.315	$3995°_{3\frac{1}{2}}-36893_{3\frac{1}{2}}$	6
3018.771	4	*WA*	33116.417	$5716°_{3\frac{1}{2}}-38832_{2\frac{1}{2}}$	−75	3038.993	6	*WA*	32896.064	$15434_{2\frac{1}{2}}-48330°_{3\frac{1}{2}}$	−26
3018.844	1	*WA*	33115.616	$16152_{3\frac{1}{2}}-49267°_{4\frac{1}{2}}$	12	3039.253	8	*WA*	32893.250	$17475°_{4\frac{1}{2}}-50368_{3\frac{1}{2}}$	−71
3019.253	1	*WA*	33111.131	$4737°_{2\frac{1}{2}}-37848_{2\frac{1}{2}}$	−45	3039.512	35	*WA*	32890.447	$5651°_{5\frac{1}{2}}-38541_{4\frac{1}{2}}$	−68
3019.871	1	*WA*	33104.355	$5437°_{3\frac{1}{2}}-38541_{4\frac{1}{2}}$	−95	3039.572	8	*WA*	32889.798	$5942°_{3\frac{1}{2}}-38832_{2\frac{1}{2}}$	−112
3020.378	1	*WA*	33098.798	$3745°_{1\frac{1}{2}}-36844_{2\frac{1}{2}}$	−31	3039.868	3	*WA*	32886.595	$8702°_{1\frac{1}{2}}-41589_{0\frac{1}{2}}$	−80
3020.883	60	*MT*	33093.265	$5716°_{3\frac{1}{2}}-38809_{3\frac{1}{2}}$	6	3040.007	3	*WA*	32885.092	$1410°_{4\frac{1}{2}}-34295_{4\frac{1}{2}}$	−53
3021.038	40	*WA*	33091.568	$5437°_{3\frac{1}{2}}-38529_{2\frac{1}{2}}$	−30	3040.252	8	*WA*	32882.442	$4459°_{3\frac{1}{2}}-37342_{2\frac{1}{2}}$	−12
3022.353	4	*WA*	33077.170	$4511°_{2\frac{1}{2}}-37588_{3\frac{1}{2}}$	−45	3040.468	2	*WA*	32880.106	$10454°_{1\frac{1}{2}}-43334_{0\frac{1}{2}}$	44
3022.463	6	*PK*	33075.967	$4266°_{3\frac{1}{2}}-37342_{2\frac{1}{2}}$	37	3041.610	12	*WA*	32867.761	$5964°_{3\frac{1}{2}}-38832_{2\frac{1}{2}}$	−51
3022.677	1	*WA*	33073.625	$11007°_{1\frac{1}{2}}-44081_{1\frac{1}{2}}$	49	3041.763	5	*WA*	32866.108	$5675°_{4\frac{1}{2}}-38541_{4\frac{1}{2}}$	−1
3022.789	25	*WA*	33072.399	$16545_{5\frac{1}{2}}-49617°_{5\frac{1}{2}}$	−31	3042.077	4	*WA*	32862.716	$0°_{3\frac{1}{2}}-32862_{3\frac{1}{2}}$	−50
3023.189	4	*WA*	33068.024	$17300°_{3\frac{1}{2}}-50368_{3\frac{1}{2}}$	−10	3042.172	3	*WA*	32861.690	$2595°_{1\frac{1}{2}}-35457_{1\frac{1}{2}}$	16
3023.285	3	*WA*	33066.974	$4737°_{2\frac{1}{2}}-37804_{1\frac{1}{2}}$	−86	3042.796	2	*WA*	32854.951	$5118°_{2\frac{1}{2}}-37973_{3\frac{1}{2}}$	−18
3023.433	20	*WA*	33065.355	$4523°_{4\frac{1}{2}}-37588_{3\frac{1}{2}}$	−84	3043.094	10	*WA*	32851.734	$12097_{3\frac{1}{2}}-44949°_{4\frac{1}{2}}$	0
3023.485	30	*MT*	33064.787	$8927°_{5\frac{1}{2}}-41992_{6\frac{1}{2}}$	−54	3043.269	4	*WA*	32849.844	$9723°_{4\frac{1}{2}}-42573_{3\frac{1}{2}}$	−11
3023.880	8	*WA*	33060.468	$1873°_{3\frac{1}{2}}-34934_{2\frac{1}{2}}$	−20	3043.713	4	*WA*	32845.053	$6549°_{2\frac{1}{2}}-39394_{3\frac{1}{2}}$	−31
3023.966	6	*WA*	33059.527	$4910°_{5\frac{1}{2}}-37970_{5\frac{1}{2}}$	−41	3044.395	35	*MT*	32837.695	$5010°_{2\frac{1}{2}}-37848_{2\frac{1}{2}}$	15
3024.166	2	*WA*	33057.341	$2140°_{0\frac{1}{2}}-35197_{1\frac{1}{2}}$	−6	3044.615	1	*WA*	32835.322	$9198°_{3\frac{1}{2}}-42033_{2\frac{1}{2}}$	−6

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3045.672	8	*WA*	32823.927	$987°_{4\,1/2}-33811_{4\,1/2}$	−28	3069.320	6	*WA*	32571.041	$4322°_{2\,1/2}-36893_{3\,1/2}$	−20
3045.792	5	*WA*	32822.634	$2634°_{2\,1/2}-35457_{1\,1/2}$	−17	3069.642	70	*WA*	32567.625	$4511°_{2\,1/2}-37078_{1\,1/2}$	3
3046.124	10	*WA*	32819.057	$10641°_{2\,1/2}-43460_{2\,1/2}$	−33	3069.721	8	*WA*	32566.786	$1410°_{4\,1/2}-33977_{3\,1/2}$	−49
3046.708	50	*WA*	32812.766	$5716°_{3\,1/2}-38529_{2\,1/2}$	−38	3070.150	1	*WA*	32562.236	$3363°_{2\,1/2}-35925_{3\,1/2}$	−18
				$7059°_{4\,1/2}-39871_{4\,1/2}$	6	3070.407	3	*WA*	32559.511	$7278°_{1\,1/2}-39838_{2\,1/2}$	−11
3047.207	5	*WA*	32807.393	$4844°_{1\,1/2}-37652_{2\,1/2}$	−53	3071.110	60	*MT*	32552.058	$1873°_{3\,1/2}-34426_{2\,1/2}$	−44
3047.503	4	*WA*	32804.207	$8280°_{2\,1/2}-41085_{3\,1/2}$	−60	3071.615	70	*PK*	32546.706	$2382°_{4\,1/2}-34928_{4\,1/2}$	−16
3047.784	2	*WA*	32801.183	$15529_{2\,1/2}-48330°_{3\,1/2}$	−30	3072.390	40	*WA*	32538.497	$2382°_{4\,1/2}-34920_{3\,1/2}$	−44
3048.308	6	*WA*	32795.544	$8402°_{3\,1/2}-41198_{2\,1/2}$	−96	3072.445	2	*WA*	32537.914	$12057°_{2\,1/2}-44594_{2\,1/2}$	93
3048.437	6	*WA*	32794.156	$9778°_{2\,1/2}-42573_{3\,1/2}$	−48	3072.798	5	*WA*	32534.176		
3048.517	8	*WA*	32793.296	$4737°_{2\,1/2}-37530_{1\,1/2}$	36	3072.886	80	*WA*	32533.245	$5118°_{2\,1/2}-37652_{2\,1/2}$	−39
3050.299	10	*WA*	32774.139	$3363°_{2\,1/2}-36137_{2\,1/2}$	−37	3073.336	10	*MT*	32528.481	$5924°_{1\,1/2}-38452_{1\,1/2}$	−64
3050.583	30	*WA*	32771.088	$4844°_{1\,1/2}-37615_{0\,1/2}$	−1	3073.429	2	*WA*	32527.497	$15803_{4\,1/2}-48330°_{3\,1/2}$	18
3051.160	8	*PK*	32764.891	$7746°_{2\,1/2}-40511_{1\,1/2}$	−50	3073.538	4	*WA*	32526.344	$10641°_{2\,1/2}-43167_{1\,1/2}$	−91
3051.287	4	*WA*	32763.527	$15281_{6\,1/2}-48045°_{6\,1/2}$	29	3073.990	10	*PK*	32521.561	$4322°_{2\,1/2}-36844_{2\,1/2}$	−35
3051.924	20	*WA*	32756.689	$6638°_{4\,1/2}-39394_{3\,1/2}$	−45	3074.164	8	*WA*	32519.720	$5010°_{2\,1/2}-37530_{1\,1/2}$	−42
3051.975	160	*MT*	32756.141	$4322°_{2\,1/2}-37078_{1\,1/2}$	−29	3074.323	12	*WA*	32518.039	$3593°_{4\,1/2}-36112_{3\,1/2}$	−99
3052.684	5	*WA*	32748.534	$3363°_{2\,1/2}-36112_{3\,1/2}$	−59	3075.206	4	*WA*	32508.702	$15822_{3\,1/2}-48330°_{3\,1/2}$	−28
3053.015	5	*WA*	32744.984	$1410°_{4\,1/2}-34155_{3\,1/2}$	−22	3075.534	6	*WA*	32505.235		
3054.200	4	*WA*	32732.279	$14727_{1\,1/2}-47459°_{2\,1/2}$	−74	3076.132	5	*WA*	32498.916	$3703°_{3\,1/2}-36202_{4\,1/2}$	−46
3054.443	5	*WA*	32729.676	$5118°_{2\,1/2}-37848_{2\,1/2}$	−67	3076.250	35	*WA*	32497.670	$4844°_{1\,1/2}-37342_{2\,1/2}$	−12
3054.613	4	*WA*	32727.854	$15822_{3\,1/2}-48549°_{4\,1/2}$	−76	3076.418	1	*WA*	32495.895	$8702°_{1\,1/2}-41198_{2\,1/2}$	30
3055.098	8	*WA*	32722.659	$16545_{5\,1/2}-49267°_{4\,1/2}$	−53	3076.893	6	*MT*	32490.879		
3055.238	280	*WA*	32721.159	$4511°_{2\,1/2}-37232_{1\,1/2}$	−21	3077.330	50	*WA*	32486.265	$5651°_{5\,1/2}-38137_{5\,1/2}$	−59
3056.130	6	*WA*	32711.609	$2634°_{2\,1/2}-35346_{3\,1/2}$	−6	3077.637	40	*WA*	32483.025	$5651°_{5\,1/2}-38134_{4\,1/2}$	−17
3056.775	260	*WA*	32704.707	$2641°_{3\,1/2}-35346_{3\,1/2}$	−15	3078.905	8	*PK*	32469.648	$5118°_{2\,1/2}-37588_{3\,1/2}$	−18
3057.383	10	*WA*	32698.204			3079.453	10	*WA*	32463.870	$4459°_{3\,1/2}-36923_{4\,1/2}$	−46
3058.107	10	*WA*	32690.463	$14739_{2\,1/2}-47430°_{3\,1/2}$	40	3079.639	80	*PK*	32461.909	$5675°_{4\,1/2}-38137_{5\,1/2}$	−9
3058.551	35	*WA*	32685.717	$5118°_{2\,1/2}-37804_{1\,1/2}$	90	3079.905	70	*WA*	32459.106	$1873°_{3\,1/2}-34333_{2\,1/2}$	−57
3059.734	20	*WA*	32673.080	$4523°_{4\,1/2}-37196_{4\,1/2}$	−25	3079.950	10	*PK*	32458.631	$5675°_{4\,1/2}-38134_{4\,1/2}$	−5
3059.903	1	*WA*	32671.276	$10058_{6\,1/2}-42729°_{5\,1/2}$	55	3080.635	60	*WA*	32451.414	$15593_{6\,1/2}-48045°_{6\,1/2}$	−25
3060.778	3	*WA*	32661.937	$10798°_{2\,1/2}-43460_{2\,1/2}$	−40	3081.245	2	*WA*	32444.990	$14252_{3\,1/2}-46697°_{4\,1/2}$	84
3061.208	7	*WA*	32657.349	$4266°_{3\,1/2}-36923_{4\,1/2}$	−42	3081.984	5	*WA*	32437.210	$12456_{3\,1/2}-44893°_{3\,1/2}$	18
3062.608	2	*WA*	32642.421	$4201°_{1\,1/2}-36844_{2\,1/2}$	9	3082.304	80	*WA*	32433.843	$4459°_{3\,1/2}-36893_{3\,1/2}$	−54
3063.008	550	*WA*	32638.158	$7233°_{5\,1/2}-39871_{4\,1/2}$	−47	3083.067	7	*WA*	32425.817	$12704_{1\,1/2}-45130°_{2\,1/2}$	−77
3063.389	5	*WA*	32634.099	$1410°_{4\,1/2}-34044_{4\,1/2}$	−37	3083.408	6	*WA*	32422.231	$987°_{4\,1/2}-33409_{3\,1/2}$	−54
3063.776	3	*WA*	32629.977	$2595°_{1\,1/2}-35225_{2\,1/2}$	−34	3083.484	2	*WA*	32421.432	$1873°_{3\,1/2}-34295_{4\,1/2}$	−83
3064.024	15	*MT*	32627.336	$4266°_{3\,1/2}-36893_{3\,1/2}$	−36	3083.670	260	*MT*	32419.476	$6389°_{4\,1/2}-38809_{3\,1/2}$	−57
3065.395	6	*WA*	32612.744	$7259°_{3\,1/2}-39871_{4\,1/2}$	−13	3083.879	3	*WA*	32417.279	$18147°_{2\,1/2}-50564_{2\,1/2}$	−19
3065.779	8	*WA*	32608.659	$3593°_{4\,1/2}-36202_{4\,1/2}$	−15	3083.956	6	*PK*	32416.470	$6521°_{1\,1/2}-38937_{1\,1/2}$	−13
3066.133	5	*WA*	32604.895	$4737°_{2\,1/2}-37342_{2\,1/2}$	−58	3084.257	8	*WA*	32413.306	$0°_{3\,1/2}-32413_{3\,1/2}$	−39
3066.380	18	*MT*	32602.268	$2595°_{1\,1/2}-35197_{1\,1/2}$	73	3084.466	200	*MT*	32411.110	$5437°_{3\,1/2}-37848_{2\,1/2}$	−17
3066.649	2	*WA*	32599.409	$14097_{3\,1/2}-46697°_{4\,1/2}$	19	3084.723	3	*WA*	32408.410	$3703°_{3\,1/2}-36112_{3\,1/2}$	−16
3067.443	6	*WA*	32590.971	$2634°_{2\,1/2}-35225_{2\,1/2}$	−18	3085.070	6	*GJ*	32404.765		
3067.895	10	*WA*	32586.169	$5942°_{3\,1/2}-38529_{2\,1/2}$	−53	3085.415	4	*WA*	32401.142	$1410°_{4\,1/2}-33811_{4\,1/2}$	−120
3068.085	1	*WA*	32584.151	$2641°_{3\,1/2}-35225_{2\,1/2}$	55	3085.453	4	*WA*	32400.743	$4523°_{4\,1/2}-36923_{4\,1/2}$	−12
3068.542	1	*WA*	32579.299	$7259°_{3\,1/2}-39838_{2\,1/2}$	−70	3085.577	3	*WA*	32399.441	$9634°_{1\,1/2}-42033_{2\,1/2}$	−27
3068.674	50	*WA*	32577.897	$4266°_{3\,1/2}-36844_{2\,1/2}$	−10	3085.758	10	*WA*	32397.540	$16152_{3\,1/2}-48549°_{4\,1/2}$	−72
3068.817	4	*WA*	32576.380	$7278°_{1\,1/2}-39855_{0\,1/2}$	−92	3086.271	2	*WA*	32392.155	$3745°_{1\,1/2}-36137_{2\,1/2}$	27
3069.147	3	*MT*	32572.877	$5969°_{5\,1/2}-38541_{4\,1/2}$	11	3086.678	5	*WA*	32387.884	$6549°_{2\,1/2}-38937_{1\,1/2}$	−23

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3087.011	3	*WA*	32384.391	$4459°_{3\,1/2}-36844_{2\,1/2}$	−41	3104.593	5	*WA*	32200.998	$14387_{4\,1/2}-46588°_{5\,1/2}$	−20
3087.183	12	*WA*	32382.587	$4511°_{2\,1/2}-36893_{3\,1/2}$	74	3104.928	4	*WA*	32197.524	$16133_{2\,1/2}-48330°_{3\,1/2}$	−71
3087.399	10	*WA*	32380.321	$13217_{3\,1/2}-45598°_{3\,1/2}$	−3	3105.148	8	*WA*	32195.243	$3363°_{2\,1/2}-35558_{3\,1/2}$	−31
3088.312	8	*WA*	32370.749	$4523°_{4\,1/2}-36893_{3\,1/2}$	12	3105.259	15	*PK*	32194.092	$4322°_{2\,1/2}-36516_{1\,1/2}$	2
3088.372	2	*WA*	32370.120	$10088°_{1\,1/2}-42458_{1\,1/2}$	17	3105.501	5	*WA*	32191.583	$5942°_{3\,1/2}-38134_{4\,1/2}$	−18
3090.369	160	*PK*	32349.203	$7522°_{5\,1/2}-39871_{4\,1/2}$	−8	3106.777	2	*WA*	32178.362	$16152_{3\,1/2}-48330°_{3\,1/2}$	−50
3090.512	60	*PK*	32347.707	$2581°_{4\,1/2}-34928_{4\,1/2}$	−4	3107.464	160	*PK*	32171.249	$6638°_{4\,1/2}-38809_{3\,1/2}$	31
3090.700	12	*WA*	32345.739	$5924°_{1\,1/2}-38269_{0\,1/2}$	−30	3107.538	2	*MT*	32170.482	$1873°_{3\,1/2}-34044_{4\,1/2}$	−24
3090.880	20	*MT*	32343.855	$10114°_{2\,1/2}-42458_{1\,1/2}$	−4	3107.636	4	*WA*	32169.468	$5964°_{3\,1/2}-38134_{4\,1/2}$	−35
3091.108	4	*WA*	32341.470	$8169°_{1\,1/2}-40511_{1\,1/2}$	41	3108.552	3	*WA*	32159.989	$11007°_{1\,1/2}-43167_{1\,1/2}$	−89
				$4737°_{2\,1/2}-37078_{1\,1/2}$	−35						
						3108.673	2	*WA*	32158.737	$7713°_{4\,1/2}-39871_{4\,1/2}$	−6
3091.294	50	*MT*	32339.524	$2581°_{4\,1/2}-34920_{3\,1/2}$	−6	3108.924	15	*WA*	32156.141		
3091.366	4	*WA*	32338.771	$2595°_{1\,1/2}-34934_{2\,1/2}$	−7	3108.962	80	*PK*	32155.748	$8927°_{5\,1/2}-41083_{4\,1/2}$	−31
3091.706	5	*MT*	32335.214	$8175°_{2\,1/2}-40511_{1\,1/2}$	−49	3109.379	15	*PK*	32151.436	$5819°_{4\,1/2}-37970_{5\,1/2}$	17
3091.918	20	*MT*	32332.997	$7522°_{0\,1/2}-39855_{0\,1/2}$	57	3110.278	260	*WA*	32142.143	$3995°_{3\,1/2}-36137_{2\,1/2}$	0
				$4511°_{2\,1/2}-36844_{2\,1/2}$	−50						
						3110.998	4	*WA*	32134.704	$11325°_{2\,1/2}-43460_{2\,1/2}$	−47
3092.035	3	*WA*	32331.774	$3593°_{4\,1/2}-35925_{3\,1/2}$	−25	3111.162	240	*PK*	32133.011	$2634°_{2\,1/2}-34767_{1\,1/2}$	−13
3092.197	5	*WA*	32330.080	$13268_{2\,1/2}-45598°_{3\,1/2}$	−2	3111.234	10	*MT*	32132.267	$5716°_{3\,1/2}-37848_{2\,1/2}$	−66
3093.243	12	*WA*	32319.148	$5651°_{5\,1/2}-37970_{5\,1/2}$	−26	3111.603	2	*WA*	32128.456	$12466°_{1\,1/2}-44594_{2\,1/2}$	−41
3093.339	12	*WA*	32318.145	$0°_{3\,1/2}-32318_{3\,1/2}$	−29	3112.202	10	*WA*	32122.273	$3593°_{4\,1/2}-35716_{5\,1/2}$	72
3093.611	18	*PK*	32315.304	$5819°_{4\,1/2}-38134_{4\,1/2}$	17	3112.426	2	*WA*	32119.961	$11340°_{3\,1/2}-43460_{2\,1/2}$	27
3093.950	8	*WA*	32311.763	$14276_{5\,1/2}-46588°_{5\,1/2}$	−69	3112.755	8	*WA*	32116.566	$3995°_{3\,1/2}-36112_{3\,1/2}$	6
3094.124	2	*WA*	32309.946	$14387_{4\,1/2}-46697°_{4\,1/2}$	−25	3113.693	5	*WA*	32106.892	$4737°_{2\,1/2}-36844_{2\,1/2}$	−39
3094.198	2	*WA*	32309.173	$987°_{4\,1/2}-33296_{4\,1/2}$	−20	3114.052	35	*PK*	32103.190	$1873°_{3\,1/2}-33977_{3\,1/2}$	−15
3095.102	12	*WA*	32299.737	$2634°_{2\,1/2}-34934_{2\,1/2}$	−19	3114.956	1	*WA*	32093.874	$3363°_{2\,1/2}-35457_{1\,1/2}$	−16
3095.262	6	*WA*	32298.068	$5675°_{4\,1/2}-37973_{3\,1/2}$	55	3115.116	6	*WA*	32092.226	$7746°_{2\,1/2}-39838_{2\,1/2}$	−33
3095.454	1	*WA*	32296.064	$15134_{4\,1/2}-47430°_{3\,1/2}$	−69	3115.647	2	*WA*	32086.756	$4201°_{1\,1/2}-36288_{0\,1/2}$	−9
3095.582	35	*WA*	32294.729	$5675°_{4\,1/2}-37970_{5\,1/2}$	−39	3115.979	5	*MT*	32083.338	$10646_{5\,1/2}-42729°_{5\,1/2}$	−38
3095.762	10	*WA*	32292.851	$2641°_{3\,1/2}-34934_{2\,1/2}$	−12	3117.006	5	*WA*	32072.767	$11387°_{3\,1/2}-43460_{2\,1/2}$	−34
3095.853	6	*PK*	32291.902	$6517°_{2\,1/2}-38809_{3\,1/2}$	45	3117.471	4	*WA*	32067.983	$5010°_{2\,1/2}-37078_{1\,1/2}$	−25
3096.278	1	*WA*	32287.470	$2641°_{3\,1/2}-34928_{4\,1/2}$	60	3117.773	6	*WA*	32064.877		
3096.402	6	*WA*	32286.177	$2634°_{2\,1/2}-34920_{3\,1/2}$	55	3118.839	2	*WA*	32053.918	$8804°_{4\,1/2}-40858_{4\,1/2}$	−62
3096.501	140	*MT*	32285.145	$4910°_{5\,1/2}-37196_{4\,1/2}$	−30	3119.591	12	*WA*	32046.192	$17571_{4\,1/2}-49617°_{5\,1/2}$	−106
3096.726	3	*WA*	32282.799	$6549°_{2\,1/2}-38832_{2\,1/2}$	−1	3120.473	5	*WA*	32037.134	$7818°_{1\,1/2}-39855_{0\,1/2}$	−113
3096.883	50	*MT*	32281.162			3121.085	4	*WA*	32030.853	$5942°_{3\,1/2}-37973_{3\,1/2}$	−119
3097.075	30	*WA*	32279.161	$2641°_{3\,1/2}-34920_{3\,1/2}$	−67	3121.281	5	*WA*	32028.841		
3098.148	8	*WA*	32267.982	$17000_{3\,1/2}-49267°_{4\,1/2}$	7	3121.640	2	*WA*	32025.158	$15434_{2\,1/2}-47459°_{2\,1/2}$	−36
3098.958	2	*WA*	32259.548	$6549°_{2\,1/2}-38809_{3\,1/2}$	−19	3122.213	3	*WA*	32019.281	$2140°_{0\,1/2}-34159_{0\,1/2}$	−103
3099.142	4	*MT*	32257.633	$5716°_{3\,1/2}-37973_{3\,1/2}$	73	3122.854	5	*WA*	32012.709	$4910°_{5\,1/2}-36923_{4\,1/2}$	−116
3099.426	8	*WA*	32254.678	$9778°_{2\,1/2}-42033_{2\,1/2}$	9	3123.344	12	*PK*	32007.687	$6521°_{1\,1/2}-38529_{2\,1/2}$	−1
3100.106	1	*WA*	32247.603	$5283°_{0\,1/2}-37530_{1\,1/2}$	0	3123.552	35	*PK*	32005.555	$4511°_{2\,1/2}-36516_{1\,1/2}$	15
3101.392	10	*WA*	32234.232	$4844°_{1\,1/2}-37078_{1\,1/2}$	−2	3123.943	15	*PK*	32001.550	$5969°_{5\,1/2}-37970_{5\,1/2}$	25
3101.784	20	*PK*	32230.158	$8280°_{2\,1/2}-40511_{1\,1/2}$	−22	3124.097	20	*PK*	31999.972	$9198°_{3\,1/2}-41198_{2\,1/2}$	−10
3102.354	8	*WA*	32224.237	$15235_{1\,1/2}-47459°_{2\,1/2}$	−77	3124.541	2	*WA*	31995.425	$15434_{2\,1/2}-47430°_{3\,1/2}$	−59
3102.431	10	*WA*	32223.437	$5118°_{2\,1/2}-37342_{2\,1/2}$	−83	3124.859	8	*WA*	31992.169	$16159°_{3\,1/2}-48151_{4\,1/2}$	−33
3102.563	35	*WA*	32222.066	$3703°_{3\,1/2}-35925_{3\,1/2}$	−21	3125.358	2	*WA*	31987.061	$7092_{5\,1/2}-39079°_{5\,1/2}$	29
3103.008	2	*MT*	32217.445	$2595°_{1\,1/2}-34813_{2\,1/2}$	−112	3125.767	12	*WA*	31982.876	$3363°_{2\,1/2}-35346_{3\,1/2}$	21
3103.269	8	*WA*	32214.736	$5437°_{3\,1/2}-37652_{2\,1/2}$	67	3126.132	1	*WA*	31979.142	$6549°_{2\,1/2}-38529_{2\,1/2}$	29
3103.375	300	*WA*	32213.636	$3593°_{4\,1/2}-35807_{4\,1/2}$	−49	3127.099	12	*WA*	31969.253	$9778°_{2\,1/2}-41748_{1\,1/2}$	−39
3104.006	70	*WA*	32207.087	$3995°_{3\,1/2}-36202_{4\,1/2}$	−9	3127.182	5	*MT*	31968.405		

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TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3127.536	180	*WA*	31964.787	$3593°_{4\,1/2}-35558_{3\,1/2}$	−32	3146.225	40	*WA*	31774.919	$5118°_{2\,1/2}-36893_{3\,1/2}$	−44
3127.747	15	*WA*	31962.630	$14625_{5\,1/2}-46588°_{5\,1/2}$	3	3146.410	260	*MT*	31773.050	$2382°_{4\,1/2}-34155_{3\,1/2}$	−14
3127.996	10	*WA*	31960.086	$5118°_{2\,1/2}-37078_{1\,1/2}$	13	3146.780	8	*WA*	31769.315	$5819°_{4\,1/2}-37588_{3\,1/2}$	−44
				$7878°_{3\,1/2}-39838_{2\,1/2}$	−30	3147.555	5	*WA*	31761.493	$8278_{5\,1/2}-40039°_{6\,1/2}$	23
3128.961	3	*WA*	31950.230	$2563°_{5\,1/2}-34513_{6\,1/2}$	−4	3147.836	20	*WA*	31758.658	$10274°_{3\,1/2}-42033_{2\,1/2}$	−25
										$5437°_{3\,1/2}-37196_{4\,1/2}$	−58
3129.041	6	*WA*	31949.413	$5283°_{0\,1/2}-37232_{1\,1/2}$	4						
3129.098	3	*WA*	31948.831	$3508°_{0\,1/2}-35457_{1\,1/2}$	−16	3148.459	90	*WA*	31752.374	$3593°_{4\,1/2}-35346_{3\,1/2}$	−25
3129.310	15	*WA*	31946.667	$12704_{1\,1/2}-44651°_{1\,1/2}$	−1	3148.651	60	*WA*	31750.437	$7059°_{4\,1/2}-38809_{3\,1/2}$	34
3130.197	15	*MT*	31937.614	$0°_{3\,1/2}-31937_{3\,1/2}$	−38	3148.832	6	*WA*	31748.612	$6521°_{1\,1/2}-38269_{0\,1/2}$	−29
				$1873°_{3\,1/2}-33811_{4\,1/2}$	−18	3148.918	3	*WA*	31747.745	$6389°_{4\,1/2}-38137_{5\,1/2}$	6
3130.337	180	*PK*	31936.186	$4266°_{3\,1/2}-36202_{4\,1/2}$	26	3149.077	3	*WA*	31746.143	$8927°_{5\,1/2}-40673_{5\,1/2}$	82
3130.516	8	*WA*	31934.360	$1873°_{3\,1/2}-33808_{2\,1/2}$	−22	3149.248	15	*WA*	31744.419	$6389°_{4\,1/2}-38134_{4\,1/2}$	−38
3130.872	220	*WA*	31930.729	$8927°_{5\,1/2}-40858_{4\,1/2}$	38	3149.422	40	*WA*	31742.665	$4459°_{3\,1/2}-36202_{4\,1/2}$	−19
				$8789_{2\,1/2}-40720°_{1\,1/2}$	−12	3149.939	15	*WA*	31737.455	$2595°_{1\,1/2}-34333_{2\,1/2}$	2
3130.919	25	*WA*	31930.250	$3995°_{3\,1/2}-35925_{3\,1/2}$	28	3150.097	4	*WA*	31735.864	$2140°_{0\,1/2}-33876_{1\,1/2}$	−20
3131.505	2	*WA*	31924.275	$5924°_{1\,1/2}-37848_{2\,1/2}$	−70	3150.461	4	*WA*	31732.197	$2563°_{5\,1/2}-34295_{4\,1/2}$	−19
3131.541	1	*WA*	31923.908	$15565°_{2\,1/2}-47489_{3\,1/2}$	48	3150.573	6	*WA*	31731.069	$13217_{3\,1/2}-44949°_{4\,1/2}$	34
3131.679	5	*WA*	31922.501	$3793°_{6\,1/2}-35716_{5\,1/2}$	52	3150.887	3	*WA*	31727.907	$5924°_{1\,1/2}-37652_{2\,1/2}$	20
3132.043	15	*MT*	31918.791	$10114°_{2\,1/2}-42033_{2\,1/2}$	19	3151.126	70	*PK*	31725.500	$5118°_{2\,1/2}-36844_{2\,1/2}$	2
3132.590	130	*MT*	31913.218	$2382°_{4\,1/2}-34295_{4\,1/2}$	14	3152.250	10	*WA*	31714.189	$2581°_{4\,1/2}-34295_{4\,1/2}$	−3
3132.640	15	*MT*	31912.709	$5675°_{4\,1/2}-37588_{3\,1/2}$	0	3152.489	2	*WA*	31711.784	$3745°_{1\,1/2}-35457_{1\,1/2}$	−58
3132.858	3	*MT*	31910.488	$14252_{3\,1/2}-46162°_{4\,1/2}$	−25	3152.728	2	*WA*	31709.380	$5942°_{3\,1/2}-37652_{2\,1/2}$	88
3133.322	150	*WA*	31905.763	$5942°_{3\,1/2}-37848_{2\,1/2}$	11	3153.474	10	*WA*	31701.879	$8774_{4\,1/2}-40475°_{3\,1/2}$	19
3133.407	8	*WA*	31904.897	$5437°_{3\,1/2}-37342_{2\,1/2}$	−7	3153.821	1	*WA*	31698.392	$2634°_{2\,1/2}-34333_{2\,1/2}$	−39
3133.533	3	*WA*	31903.614	$6638°_{4\,1/2}-38541_{4\,1/2}$	0	3154.005	8	*WA*	31696.542	$17571_{4\,1/2}-49267°_{4\,1/2}$	−38
3133.616	2	*WA*	31902.769	$6549°_{2\,1/2}-38452_{1\,1/2}$	−72	3154.504	120	*WA*	31691.529	$2641°_{3\,1/2}-34333_{2\,1/2}$	−9
3135.179	15	*WA*	31886.865	$9198°_{3\,1/2}-41085_{3\,1/2}$	−22	3154.945	1	*WA*	31687.099	$5964°_{3\,1/2}-37652_{2\,1/2}$	−95
3135.566	12	*WA*	31882.930	$5010°_{2\,1/2}-36893_{3\,1/2}$	30	3155.461	3	*WA*	31681.917	$7713°_{4\,1/2}-39394_{3\,1/2}$	14
3135.833	6	*WA*	31880.215	$5924°_{1\,1/2}-37804_{1\,1/2}$	−14	3155.702	150	*PK*	31679.498	$4523°_{4\,1/2}-36202_{4\,1/2}$	−25
3136.243	5	*WA*	31876.048	$7061°_{0\,1/2}-38937_{1\,1/2}$	70	3155.792	150	*PK*	31678.595	$1873°_{3\,1/2}-33552_{2\,1/2}$	−52
3136.719	150	*PK*	31871.211	$4266°_{3\,1/2}-36137_{2\,1/2}$	4	3156.422	8	*WA*	31672.272	$4844°_{1\,1/2}-36516_{1\,1/2}$	118
3136.903	8	*WA*	31869.342	$8804°_{4\,1/2}-40673_{5\,1/2}$	−8	3156.773	12	*WA*	31668.750	$8169°_{1\,1/2}-39838_{2\,1/2}$	4
3137.601	90	*MT*	31862.252	$3363°_{2\,1/2}-35225_{2\,1/2}$	23	3157.399	8	*WA*	31662.472	$8175°_{2\,1/2}-39838_{2\,1/2}$	−109
3137.809	6	*WA*	31860.140			3157.718	10	*WA*	31659.273	$4266°_{3\,1/2}-35925_{3\,1/2}$	−11
3138.298	40	*WA*	31855.176	$17232_{7\,1/2}-49087°_{7\,1/2}$	−51	3158.262	3	*WA*	31653.820	$2641°_{3\,1/2}-34295_{4\,1/2}$	−70
3138.672	1	*WA*	31851.380	$0°_{3\,1/2}-31851_{2\,1/2}$	−16	3158.432	12	*WA*	31652.117	$4459°_{3\,1/2}-36112_{3\,1/2}$	−31
3139.241	10	*WA*	31845.607	$4266°_{3\,1/2}-36112_{3\,1/2}$	−16	3158.812	15	*MT*	31648.309	$10924°_{4\,1/2}-42573_{3\,1/2}$	−5
3139.586	1	*WA*	31842.108	$11325°_{2\,1/2}-43167_{1\,1/2}$	9	3158.882	8	*WA*	31647.608		
3140.346	2	*WA*	31834.402	$3363°_{2\,1/2}-35197_{1\,1/2}$	−10	3159.072	8	*WA*	31645.705	$5942°_{3\,1/2}-37588_{3\,1/2}$	30
3140.432	4	*WA*	31833.530	$5010°_{2\,1/2}-36844_{2\,1/2}$	95	3159.378	8	*WA*	31642.640	$3703°_{3\,1/2}-35346_{3\,1/2}$	−47
3140.676	12	*MT*	31831.057	$13117_{4\,1/2}-44949°_{4\,1/2}$	−31	3160.280	5	*WA*	31633.609		
3142.311	90	*WA*	31814.495	$987°_{4\,1/2}-32802_{5\,1/2}$	−58	3160.306	8	*WA*	31633.348	$10114°_{2\,1/2}-41748_{1\,1/2}$	−47
3142.547	12	*WA*	31812.106	$3995°_{3\,1/2}-35807_{4\,1/2}$	−1	3161.026	15	*MT*	31626.143	$5716°_{3\,1/2}-37342_{2\,1/2}$	33
3142.890	4	*WA*	31808.635	$8702°_{1\,1/2}-40511_{1\,1/2}$	−47	3162.052	3	*WA*	31615.882	$8423_{6\,1/2}-40039°_{6\,1/2}$	30
3143.593	8	*WA*	31801.522			3162.279	1	*WA*	31613.613	$7278°_{1\,1/2}-38892_{0\,1/2}$	34
3144.596	180	*MT*	31791.378	$2634°_{2\,1/2}-34426_{2\,1/2}$	8	3162.835	5	*WA*	31608.055	$15822_{3\,1/2}-47430°_{3\,1/2}$	−69
3144.817	10	*WA*	31789.145	$17300°_{3\,1/2}-49089_{2\,1/2}$	−30	3162.996	8	*WA*	31606.446	$5924°_{1\,1/2}-37530_{1\,1/2}$	18
3145.281	260	*WA*	31784.455	$2641°_{3\,1/2}-34426_{2\,1/2}$	−22	3163.345	15	*MT*	31602.960	$4322°_{2\,1/2}-35925_{3\,1/2}$	−13
3145.777	2	*WA*	31779.444	$4737°_{2\,1/2}-36516_{1\,1/2}$	19	3163.553	3	*WA*	31600.882	$4511°_{2\,1/2}-36112_{3\,1/2}$	118
3146.165	20	*MT*	31775.525	$14387_{4\,1/2}-46162°_{4\,1/2}$	−54	3164.153	260	*WA*	31594.890	$2382°_{4\,1/2}-33977_{3\,1/2}$	−3

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3164.745	3	*WA*	31588.980	$4523°_{4\,1/2}-36112_{3\,1/2}$	−7	3183.994	4	*MT*	31398.014	$5118°_{2\,1/2}-36516_{1\,1/2}$	22
3165.360	1	*WA*	31582.843	$13012°_{2\,1/2}-44594_{2\,1/2}$	10	3184.208	70	*PK*	31395.904	$2581°_{4\,1/2}-33977_{3\,1/2}$	21
3165.594	2	*WA*	31580.508	$6389°_{4\,1/2}-37970_{5\,1/2}$	−81	3184.330	2	*WA*	31394.701	$13256_{1\,1/2}-44651°_{1\,1/2}$	99
3166.096	3	*WA*	31575.501			3184.622	12	*MT*	31391.822	$1410°_{4\,1/2}-32802_{5\,1/2}$	−38
3166.244	130	*WA*	31574.025	$2581°_{4\,1/2}-34155_{3\,1/2}$	−28	3184.716	10	*PK*	31390.896	$7061°_{0\,1/2}-38452_{1\,1/2}$	−15
3166.557	10	*WA*	31570.904	$3363°_{2\,1/2}-34934_{2\,1/2}$	−89	3185.104	3	*WA*	31387.072		
				$15859_{4\,1/2}-47430°_{3\,1/2}$	83	3185.506	6	*WA*	31383.111	$13268_{2\,1/2}-44651°_{1\,1/2}$	27
3166.604	90	*PK*	31570.436	$2595°_{1\,1/2}-34166_{1\,1/2}$	41	3186.124	220	*AK*	31377.024	$5819°_{4\,1/2}-37196_{4\,1/2}$	−1
3166.986	3	*WA*	31566.628	$9723°_{4\,1/2}-41289_{5\,1/2}$	−7	3186.836	1	*WA*	31370.014	$7522°_{0\,1/2}-38892_{0\,1/2}$	−28
3167.226	40	*MT*	31564.236	$2595°_{1\,1/2}-34159_{0\,1/2}$	3	3187.667	20	*WA*	31361.837	$9723°_{4\,1/2}-41085_{3\,1/2}$	−41
3167.324	40	*MT*	31563.259	$3995°_{3\,1/2}-35558_{3\,1/2}$	17	3187.858	15	*PK*	31359.958	$9723°_{4\,1/2}-41083_{4\,1/2}$	0
3167.790	6	*WA*	31558.616	$0°_{3\,1/2}-31558_{3\,1/2}$	−9	3188.307	8	*WA*	31355.542		
3167.915	15	*WA*	31557.371	$3363°_{2\,1/2}-34920_{3\,1/2}$	10	3188.787	160	*MT*	31350.822	$3995°_{3\,1/2}-35346_{3\,1/2}$	0
3168.613	25	*PK*	31550.420	$7259°_{3\,1/2}-38809_{3\,1/2}$	19	3189.105	4	*WA*	31347.696	$4459°_{3\,1/2}-35807_{4\,1/2}$	0
3169.183	260	*MT*	31544.746	$5651°_{5\,1/2}-37196_{4\,1/2}$	−35	3189.265	15	*MT*	31346.123	$14252_{3\,1/2}-45598°_{3\,1/2}$	1
3170.069	12	*MT*	31535.929	$1873°_{3\,1/2}-33409_{3\,1/2}$	−33	3189.636	90	*WA*	31342.478	$2634°_{2\,1/2}-33977_{3\,1/2}$	4
3170.528	3	*WA*	31531.364	$2634°_{2\,1/2}-34166_{1\,1/2}$	−8	3190.339	180	*PK*	31335.571	$2641°_{3\,1/2}-33977_{3\,1/2}$	−9
3171.465	6	*WA*	31522.049	$3703°_{3\,1/2}-35225_{2\,1/2}$	−12	3190.394	20	*WA*	31335.031	$14827_{3\,1/2}-46162°_{4\,1/2}$	−37
3171.613	260	*MT*	31520.578	$2634°_{2\,1/2}-34155_{3\,1/2}$	−66					$3593°_{4\,1/2}-34928_{4\,1/2}$	−55
3172.005	1	*WA*	31516.682	$7878°_{3\,1/2}-39394_{3\,1/2}$	18	3190.677	1	*WA*	31332.252	$6638°_{4\,1/2}-37970_{5\,1/2}$	−21
3172.299	40	*MT*	31513.762	$2641°_{3\,1/2}-34155_{3\,1/2}$	10	3190.833	8	*WA*	31330.720	$17000_{3\,1/2}-48330°_{3\,1/2}$	−62
3172.541	6	*WA*	31511.358	$11949°_{3\,1/2}-43460_{2\,1/2}$	14	3191.185	15	*MT*	31327.264	$6521°_{1\,1/2}-37848_{2\,1/2}$	47
3173.080	1	*WA*	31506.005	$5010°_{2\,1/2}-36516_{1\,1/2}$	78	3193.126	10	*WA*	31308.222	$5924°_{1\,1/2}-37232_{1\,1/2}$	−11
3173.235	8	*WA*	31504.467	$987°_{4\,1/2}-32492_{5\,1/2}$	40					$7233°_{5\,1/2}-38541_{4\,1/2}$	−23
3173.629	15	*WA*	31500.555	$14097_{3\,1/2}-45598°_{3\,1/2}$	−51	3193.327	40	*PK*	31306.252	$9778°_{2\,1/2}-41085_{3\,1/2}$	24
3173.736	1	*WA*	31499.493	$6638°_{4\,1/2}-38137_{5\,1/2}$	70	3194.102	15	*MT*	31298.656	$6549°_{2\,1/2}-37848_{2\,1/2}$	14
3174.074	15	*PK*	31496.139	$6638°_{4\,1/2}-38134_{4\,1/2}$	−2	3194.683	10	*WA*	31292.964	$4844°_{1\,1/2}-36137_{2\,1/2}$	4
3175.059	10	*WA*	31486.369	$5437°_{3\,1/2}-36923_{4\,1/2}$	2	3194.821	650	*WA*	31291.613	$4910°_{5\,1/2}-36202_{4\,1/2}$	19
3175.581	5	*WA*	31481.193	$2563°_{5\,1/2}-34044_{4\,1/2}$	−14	3195.323	8	*WA*	31286.697	$9771_{7\,1/2}-41058°_{7\,1/2}$	39
3175.712	12	*PK*	31479.894	$5716°_{3\,1/2}-37196_{4\,1/2}$	−28	3195.546	12	*WA*	31284.513	$4523°_{4\,1/2}-35807_{4\,1/2}$	−21
3176.794	120	*PK*	31469.173	$8402°_{3\,1/2}-39871_{4\,1/2}$	8	3195.713	15	*WA*	31282.879	$7259°_{3\,1/2}-38541_{4\,1/2}$	81
3177.132	40	*WA*	31465.825	$4459°_{3\,1/2}-35925_{3\,1/2}$	16	3195.934	40	*WA*	31280.715	$2595°_{1\,1/2}-33876_{1\,1/2}$	−17
3178.107	12	*WA*	31456.172	$6517°_{2\,1/2}-37973_{3\,1/2}$	16	3196.548	3	*WA*	31274.707	$11454_{6\,1/2}-42729°_{5\,1/2}$	−38
3178.243	5	*WA*	31454.826	$13675_{2\,1/2}-45130°_{2\,1/2}$	19					$1873°_{3\,1/2}-33148_{2\,1/2}$	52
3178.316	3	*WA*	31454.104	$15134_{4\,1/2}-46588°_{5\,1/2}$	23	3197.036	5	*WA*	31269.933	$7259°_{3\,1/2}-38529_{2\,1/2}$	−12
3178.482	15	*PK*	31452.461	$1410°_{4\,1/2}-32862_{3\,1/2}$	−1	3198.136	2	*WA*	31259.179	$3508°_{0\,1/2}-34767_{1\,1/2}$	−41
3178.754	40	*MT*	31449.770	$3363°_{2\,1/2}-34813_{2\,1/2}$	−4	3198.240	6	*WA*	31258.162	$11454_{6\,1/2}-42712°_{6\,1/2}$	53
3179.336	10	*PK*	31444.013	$4844°_{1\,1/2}-36288_{0\,1/2}$	−1	3198.623	1	*WA*	31254.420	$11458_{5\,1/2}-42712°_{6\,1/2}$	−36
3180.824	40	*WA*	31429.304	$2382°_{4\,1/2}-33811_{4\,1/2}$	−16	3198.729	5	*WA*	31253.384	$5942°_{3\,1/2}-37196_{4\,1/2}$	43
3181.192	8	*WA*	31425.668	$987°_{4\,1/2}-32413_{3\,1/2}$	−66	3199.279	180	*MT*	31248.011	$5675°_{4\,1/2}-36923_{4\,1/2}$	−14
3181.378	6	*WA*	31423.831	$6549°_{2\,1/2}-37973_{3\,1/2}$	−36	3200.515	40	*WA*	31235.944	$4322°_{2\,1/2}-35558_{3\,1/2}$	−49
3181.474	2	*WA*	31422.883	$1873°_{3\,1/2}-33296_{4\,1/2}$	12	3200.625	6	*MT*	31234.870	$0°_{3\,1/2}-31234_{2\,1/2}$	−8
3181.591	10	*WA*	31421.727	$13527_{4\,1/2}-44949°_{4\,1/2}$	−44	3200.736	1	*WA*	31233.787	$5283°_{0\,1/2}-36516_{1\,1/2}$	19
3181.840	6	*WA*	31419.269	$9778°_{2\,1/2}-41198_{2\,1/2}$	−53	3200.867	10	*WA*	31232.509	$11340°_{3\,1/2}-42573_{3\,1/2}$	−83
3181.956	6	*WA*	31418.123	$5924°_{1\,1/2}-37342_{2\,1/2}$	1	3201.105	15	*MT*	31230.187	$3995°_{3\,1/2}-35225_{2\,1/2}$	−8
3182.195	15	*PK*	31415.764	$2879°_{5\,1/2}-34295_{4\,1/2}$	9	3201.421	12	*WA*	31227.105	$5969°_{5\,1/2}-37196_{4\,1/2}$	−26
3182.662	20	*MT*	31411.154	$2595°_{1\,1/2}-34006_{0\,1/2}$	−23	3201.712	900	*WA*	31224.266	$6913°_{6\,1/2}-38137_{5\,1/2}$	−23
3183.093	5	*MT*	31406.901	$5437°_{3\,1/2}-36844_{2\,1/2}$	18	3202.244	10	*WA*	31219.079	$8175°_{2\,1/2}-39394_{3\,1/2}$	−50
3183.523	440	*MT*	31402.659	$4523°_{4\,1/2}-35925_{3\,1/2}$	10	3202.356	10	*MT*	31217.987	$5675°_{4\,1/2}-36893_{3\,1/2}$	−19
3183.844	4	*WA*	31399.493	$5942°_{3\,1/2}-37342_{2\,1/2}$	−35	3202.443	5	*WA*	31217.139	$3703°_{3\,1/2}-34920_{3\,1/2}$	−54

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3202.653	4	*WA*	31215.093			3222.853	6	*WA*	31019.451		
3202.906	15	*MT*	31212.627	$2595°_{1\,1/2}-33808_{2\,1/2}$	−45	3223.362	40	*WA*	31014.553	$7818°_{1\,1/2}-38832_{2\,1/2}$	−8
3203.053	2	*WA*	31211.194	$14387_{4\,1/2}-45598°_{3\,1/2}$	6	3223.519	8	*WA*	31013.043	$6517°_{2\,1/2}-37530_{1\,1/2}$	29
3203.144	6	*WA*	31210.308	$987°_{4\,1/2}-32197_{4\,1/2}$	−62	3223.905	15	*WA*	31009.330	$6521°_{1\,1/2}-37530_{1\,1/2}$	29
3203.388	3	*WA*	31207.930	$0°_{3\,1/2}-31207_{3\,1/2}$	4	3224.295	3	*MT*	31005.579	$5283°_{0\,1/2}-36288_{0\,1/2}$	−50
3203.624	2	*WA*	31205.632	$1873°_{3\,1/2}-33079_{3\,1/2}$	54	3224.834	10	*WA*	31000.397	$10058_{6\,1/2}-41058°_{7\,1/2}$	9
3204.160	30	*MT*	31200.412	$12260°_{3\,1/2}-43460_{2\,1/2}$	−32	3225.301	1	*WA*	30995.908	$4201°_{1\,1/2}-35197_{1\,1/2}$	−38
3204.353	15	*PK*	31198.533	$6389°_{4\,1/2}-37588_{3\,1/2}$	2	3225.485	4	*WA*	30994.140	$12466°_{1\,1/2}-43460_{2\,1/2}$	38
3204.918	10	*PK*	31193.033	$4523°_{4\,1/2}-35716_{5\,1/2}$	−16	3225.672	300	*MT*	30992.344	$8402°_{3\,1/2}-39394_{3\,1/2}$	19
3205.406	12	*WA*	31188.284	$4737°_{2\,1/2}-35925_{3\,1/2}$	−24	3226.036	8	*MT*	30988.847	$1873°_{3\,1/2}-32862_{3\,1/2}$	14
3205.954	90	*WA*	31182.953	$7011_{4\,1/2}-38194°_{4\,1/2}$	29	3226.895	2	*WA*	30980.598	$17171°_{5\,1/2}-48151_{4\,1/2}$	104
3206.035	8	*WA*	31182.165							$6549°_{2\,1/2}-37530_{1\,1/2}$	−123
3206.509	15	*WA*	31177.556	$5716°_{3\,1/2}-36893_{3\,1/2}$	2	3227.114	650	*MT*	30978.496	$2595°_{1\,1/2}-33574_{1\,1/2}$	−4
3206.915	15	*WA*	31173.609	$2634°_{2\,1/2}-33808_{2\,1/2}$	−41	3228.034	25	*PK*	30969.667	$3363°_{2\,1/2}-34333_{2\,1/2}$	−3
3207.286	10	*WA*	31170.003	$2641°_{3\,1/2}-33811_{4\,1/2}$	−4	3228.199	2	*WA*	30968.084	$2563°_{5\,1/2}-33531_{6\,1/2}$	−70
3207.625	15	*WA*	31166.709	$2641°_{3\,1/2}-33808_{2\,1/2}$	−48	3229.122	90	*MT*	30959.232	$4266°_{3\,1/2}-35225_{2\,1/2}$	−26
3209.048	6	*WA*	31152.889	$8702°_{1\,1/2}-39855_{0\,1/2}$	−65	3229.363	220	*MT*	30956.922	$2595°_{1\,1/2}-33552_{2\,1/2}$	−15
3209.570	6	*WA*	31147.823	$13503_{0\,1/2}-44651°_{1\,1/2}$	28	3229.585	12	*PK*	30954.794	$5969°_{5\,1/2}-36923_{4\,1/2}$	13
3210.094	8	*MT*	31142.738	$8896_{5\,1/2}-40039°_{6\,1/2}$	−56	3230.023	4	*WA*	30950.597		
3210.951	90	*WA*	31134.427	$6517°_{2\,1/2}-37652_{2\,1/2}$	−44	3230.082	40	*WA*	30950.031	$987°_{4\,1/2}-31937_{3\,1/2}$	−10
3211.333	10	*WA*	31130.723	$6521°_{1\,1/2}-37652_{2\,1/2}$	−35	3230.284	10	*WA*	30948.096	$8131_{4\,1/2}-39079°_{5\,1/2}$	15
3211.606	8	*WA*	31128.077	$5716°_{3\,1/2}-36844_{2\,1/2}$	−11	3231.239	440	*WA*	30938.950	$3995°_{3\,1/2}-34934_{2\,1/2}$	−12
3212.320	3	*MT*	31121.158			3231.807	5	*WA*	30933.512	$3995°_{3\,1/2}-34928_{4\,1/2}$	3
3212.481	20	*WA*	31119.599	$7818°_{1\,1/2}-38937_{1\,1/2}$	−69	3231.980	6	*WA*	30931.856	$2879°_{5\,1/2}-33811_{4\,1/2}$	−15
3213.059	10	*WA*	31114.001	$8280°_{2\,1/2}-39394_{3\,1/2}$	−45	3232.054	1	*WA*	30931.149	$7878°_{3\,1/2}-38809_{3\,1/2}$	1
3213.398	1	*WA*	31110.719	$12057°_{2\,1/2}-43167_{1\,1/2}$	−53	3232.141	1	*WA*	30930.316	$7522°_{0\,1/2}-38452_{1\,1/2}$	24
3213.530	4	*WA*	31109.441			3232.297	15	*WA*	30928.823	$5964°_{3\,1/2}-36893_{3\,1/2}$	−50
3214.024	15	*WA*	31104.660	$5819°_{4\,1/2}-36923_{4\,1/2}$	−15	3232.476	4	*WA*	30927.111		
3214.250	12	*WA*	31102.472	$7092_{5\,1/2}-38194°_{4\,1/2}$	10	3232.665	5	*WA*	30925.302	$3995°_{3\,1/2}-34920_{3\,1/2}$	−25
3214.630	3	*WA*	31098.796	$4459°_{3\,1/2}-35558_{3\,1/2}$	−33	3232.875	8	*WA*	30923.294	$10274°_{3\,1/2}-41198_{2\,1/2}$	−43
3214.883	3	*WA*	31096.349	$7713°_{4\,1/2}-38809_{3\,1/2}$	−37	3233.208	5	*WA*	30920.109	$5924°_{1\,1/2}-36844_{2\,1/2}$	8
3215.089	10	*WA*	31094.356	$6521°_{1\,1/2}-37615_{0\,1/2}$	−45	3233.441	130	*MT*	30917.881	$2634°_{2\,1/2}-33552_{2\,1/2}$	−34
3215.896	10	*WA*	31086.554	$7746°_{2\,1/2}-38832_{2\,1/2}$	30	3233.773	15	*MT*	30914.707	$7059°_{4\,1/2}-37973_{3\,1/2}$	3
3216.225	5	*WA*	31083.374	$10114°_{2\,1/2}-41198_{2\,1/2}$	−51	3234.161	650	*MT*	30910.998	$2641°_{3\,1/2}-33552_{2\,1/2}$	−24
3216.587	8	*WA*	31079.876	$4266°_{3\,1/2}-35346_{3\,1/2}$	−8	3234.274	5	*MT*	30909.918	$2140°_{0\,1/2}-33050_{1\,1/2}$	119
3216.715	12	*WA*	31078.639	$7059°_{4\,1/2}-38137_{5\,1/2}$	29	3234.495	10	*WA*	30907.806	$1410°_{4\,1/2}-32318_{3\,1/2}$	−64
3217.130	15	*PK*	31074.630	$5819°_{4\,1/2}-36893_{3\,1/2}$	−26	3234.887	300	*WA*	30904.061	$7233°_{5\,1/2}-38137_{5\,1/2}$	6
3217.522	20	*MT*	31070.844	$6517°_{2\,1/2}-37588_{3\,1/2}$	−9	3235.011	40	*MT*	30902.877	$4322°_{2\,1/2}-35225_{2\,1/2}$	−70
3217.866	4	*WA*	31067.523	$8804°_{4\,1/2}-39871_{4\,1/2}$	−85	3235.670	70	*MT*	30896.583	$4910°_{5\,1/2}-35807_{4\,1/2}$	−21
3218.377	180	*PK*	31062.591	$3363°_{2\,1/2}-34426_{2\,1/2}$	−18	3236.735	360	*MT*	30886.417	$4459°_{3\,1/2}-35346_{3\,1/2}$	7
3218.944	650	*MT*	31057.119	$6913°_{6\,1/2}-37970_{5\,1/2}$	−20	3237.917	1	*WA*	30875.142	$4322°_{2\,1/2}-35197_{1\,1/2}$	11
3219.948	3	*WA*	31047.436	$4511°_{2\,1/2}-35558_{3\,1/2}$	−8	3238.680	2	*WA*	30867.869	$12466°_{1\,1/2}-43334_{0\,1/2}$	−34
3220.400	12	*PK*	31043.078	$0°_{3\,1/2}-31043_{2\,1/2}$	−31	3239.658	2	*WA*	30858.551	$14739_{2\,1/2}-45598°_{3\,1/2}$	11
3220.871	90	*MT*	31038.539	$6549°_{2\,1/2}-37588_{3\,1/2}$	−25	3240.406	5	*WA*	30851.427	$17300°_{3\,1/2}-48151_{4\,1/2}$	−1
3221.061	6	*WA*	31036.708	$2140°_{0\,1/2}-33177_{0\,1/2}$	4	3240.672	4	*WA*	30848.895		
3221.171	800	*MT*	31035.648	$4523°_{4\,1/2}-35558_{3\,1/2}$	−20	3241.214	15	*MT*	30843.737	$7293°_{6\,1/2}-38137_{5\,1/2}$	−6
3221.470	5	*WA*	31032.768	$14097_{3\,1/2}-45130°_{2\,1/2}$	−66	3242.129	15	*PK*	30835.032	$4511°_{2\,1/2}-35346_{3\,1/2}$	8
3221.902	3	*WA*	31028.607	$15134_{4\,1/2}-46162°_{4\,1/2}$	−34	3242.788	6	*WA*	30828.766	$7713°_{4\,1/2}-38541_{4\,1/2}$	−17
3222.003	3	*WA*	31027.634	$2382°_{4\,1/2}-33409_{3\,1/2}$	−16	3243.214	6	*WA*	30824.717	$6517°_{2\,1/2}-37342_{2\,1/2}$	9
3222.407	40	*WA*	31023.745	$4201°_{1\,1/2}-35225_{2\,1/2}$	−17	3243.370	360	*MT*	30823.235	$4523°_{4\,1/2}-35346_{3\,1/2}$	−13

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3243.573	8	*WA*	30821.306	$4737°_{2\frac{1}{2}}-35558_{3\frac{1}{2}}$	−22	3265.145	6	*WA*	30617.684	$19946°_{1\frac{1}{2}}-50564_{2\frac{1}{2}}$	−51
3243.949	6	*WA*	30817.733	$3995°_{3\frac{1}{2}}-34813_{2\frac{1}{2}}$	−8	3265.423	40	*MT*	30615.077	$7522°_{5\frac{1}{2}}-38137_{5\frac{1}{2}}$	17
3244.747	2	*WA*	30810.154	$13784°_{1\frac{1}{2}}-44594_{2\frac{1}{2}}$	60	3265.568	10	*WA*	30613.718	$3363°_{2\frac{1}{2}}-33977_{3\frac{1}{2}}$	5
3244.943	10	*WA*	30808.293	$10274°_{3\frac{1}{2}}-41083_{4\frac{1}{2}}$	−29	3265.679	8	*WA*	30612.678	$4844°_{1\frac{1}{2}}-35457_{1\frac{1}{2}}$	4
3245.124	10	*WA*	30806.575			3265.828	15	*WA*	30611.281	$4201°_{1\frac{1}{2}}-34813_{2\frac{1}{2}}$	−27
3245.166	90	*MT*	30806.176	$6389°_{4\frac{1}{2}}-37196_{4\frac{1}{2}}$	−20	3266.865	5	*WA*	30601.564	$14049_{1\frac{1}{2}}-44651°_{1\frac{1}{2}}$	23
3245.544	15	*PK*	30802.588	$3363°_{2\frac{1}{2}}-34166_{1\frac{1}{2}}$	−23	3267.237	12	*WA*	30598.080	$4322°_{2\frac{1}{2}}-34920_{3\frac{1}{2}}$	0
3245.684	5	*WA*	30801.260	$8278_{5\frac{1}{2}}-39079°_{5\frac{1}{2}}$	16	3267.832	3	*WA*	30592.509	$5924°_{1\frac{1}{2}}-36516_{1\frac{1}{2}}$	−84
3246.672	180	*PK*	30791.887	$3363°_{2\frac{1}{2}}-34155_{3\frac{1}{2}}$	3	3267.912	4	*WA*	30591.760	$3703°_{3\frac{1}{2}}-34295_{4\frac{1}{2}}$	−95
3247.118	6	*WA*	30787.658	$1410°_{4\frac{1}{2}}-32197_{4\frac{1}{2}}$	−19	3268.022	5	*WA*	30590.730	$8804°_{4\frac{1}{2}}-39394_{3\frac{1}{2}}$	−38
3247.416	2	*WA*	30784.833	$15803_{4\frac{1}{2}}-46588°_{5\frac{1}{2}}$	12	3268.160	4	*WA*	30589.439	$7259°_{3\frac{1}{2}}-37848_{2\frac{1}{2}}$	−35
3247.898	6	*WA*	30780.264	$2879°_{5\frac{1}{2}}-33659_{5\frac{1}{2}}$	−8	3268.823	1	*WA*	30583.235	$10274°_{3\frac{1}{2}}-40858_{4\frac{1}{2}}$	1
3248.065	8	*WA*	30778.682	$17851°_{0\frac{1}{2}}-48630_{1\frac{1}{2}}$	25	3269.124	10	*PK*	30580.419	$987°_{4\frac{1}{2}}-31568_{4\frac{1}{2}}$	11
3248.429	15	*WA*	30775.233	$2634°_{2\frac{1}{2}}-33409_{3\frac{1}{2}}$	2	3270.129	15	*PK*	30571.021	$987°_{4\frac{1}{2}}-31558_{3\frac{1}{2}}$	6
3249.164	90	*PK*	30768.272	$2641°_{3\frac{1}{2}}-33409_{3\frac{1}{2}}$	−65	3270.690	10	*WA*	30565.778	$4201°_{1\frac{1}{2}}-34767_{1\frac{1}{2}}$	−19
3249.427	40	*PK*	30765.781	$4459°_{3\frac{1}{2}}-35225_{2\frac{1}{2}}$	−2	3271.157	90	*WA*	30561.414	$3593°_{4\frac{1}{2}}-34155_{3\frac{1}{2}}$	−14
3249.498	5	*WA*	30765.109	$5437°_{3\frac{1}{2}}-36202_{4\frac{1}{2}}$	−25	3271.548	90	*PK*	30557.762	$6638°_{4\frac{1}{2}}-37196_{4\frac{1}{2}}$	−116
3249.831	6	*WA*	30761.957	$8175°_{2\frac{1}{2}}-38937_{1\frac{1}{2}}$	4	3271.961	15	*MT*	30553.905	$7061°_{0\frac{1}{2}}-37615_{0\frac{1}{2}}$	9
3251.370	4	*MT*	30747.397	$7522°_{0\frac{1}{2}}-38269_{0\frac{1}{2}}$	−118	3272.064	25	*WA*	30552.943	$2595°_{1\frac{1}{2}}-33148_{2\frac{1}{2}}$	−1
3251.725	3	*WA*	30744.040	$10454°_{1\frac{1}{2}}-41198_{2\frac{1}{2}}$	3	3272.253	900	*MT*	30551.178	$5651°_{5\frac{1}{2}}-36202_{4\frac{1}{2}}$	−21
3251.882	15	*PK*	30742.556	$7061°_{0\frac{1}{2}}-37804_{1\frac{1}{2}}$	−39	3272.606	10	*WA*	30547.883	$5010°_{2\frac{1}{2}}-35558_{3\frac{1}{2}}$	51
3252.108	2	*WA*	30740.419	$11007°_{1\frac{1}{2}}-41748_{1\frac{1}{2}}$	−60	3272.724	10	*WA*	30546.782	$4266°_{3\frac{1}{2}}-34813_{2\frac{1}{2}}$	−22
3252.482	130	*AK*	30736.885	$7233°_{5\frac{1}{2}}-37970_{5\frac{1}{2}}$	−19	3273.516	8	*WA*	30539.391	$1873°_{3\frac{1}{2}}-32413_{3\frac{1}{2}}$	−20
3252.982	5	*WA*	30732.160	$9778°_{2\frac{1}{2}}-40511_{1\frac{1}{2}}$	20	3273.926	8	*WA*	30535.567		
3253.342	10	*MT*	30728.760	$15859_{4\frac{1}{2}}-46588°_{5\frac{1}{2}}$	−7	3274.112	10	*WA*	30533.832	$6389°_{4\frac{1}{2}}-36923_{4\frac{1}{2}}$	−14
3254.013	130	*WA*	30722.424	$3703°_{3\frac{1}{2}}-34426_{2\frac{1}{2}}$	−18	3274.616	10	*WA*	30529.133		
3254.287	6	*WA*	30719.837	$3793°_{6\frac{1}{2}}-34513_{6\frac{1}{2}}$	3	3274.660	8	*WA*	30528.723		
				$2140°_{0\frac{1}{2}}-32860_{0\frac{1}{2}}$	−23	3274.864	300	*MT*	30526.821	$5675°_{4\frac{1}{2}}-36202_{4\frac{1}{2}}$	28
3254.861	12	*WA*	30714.420	$4511°_{2\frac{1}{2}}-35225_{2\frac{1}{2}}$	21	3275.567	5	*WA*	30520.270		
3255.215	8	*WA*	30711.080	$6521°_{1\frac{1}{2}}-37232_{1\frac{1}{2}}$	−25	3276.246	130	*WA*	30513.945	$2634°_{2\frac{1}{2}}-33148_{2\frac{1}{2}}$	22
3256.224	5	*PK*	30701.563	$3593°_{4\frac{1}{2}}-34295_{4\frac{1}{2}}$	−4	3276.356	8	*WA*	30512.920	$3363°_{2\frac{1}{2}}-33876_{1\frac{1}{2}}$	−29
3256.365	1	*WA*	30700.234	$5437°_{3\frac{1}{2}}-36137_{2\frac{1}{2}}$	52	3276.623	2	*WA*	30510.434	$18147°_{2\frac{1}{2}}-48657_{3\frac{1}{2}}$	103
3256.681	20	*WA*	30697.255	$2382°_{4\frac{1}{2}}-33079_{3\frac{1}{2}}$	−10	3277.931	10	*WA*	30498.260	$2581°_{4\frac{1}{2}}-33079_{3\frac{1}{2}}$	5
3257.132	8	*WA*	30693.005	$11340°_{3\frac{1}{2}}-42033_{2\frac{1}{2}}$	−51	3277.989	4	*WA*	30497.720	$2140°_{0\frac{1}{2}}-32638_{1\frac{1}{2}}$	47
3257.813	6	*MT*	30686.589	$4511°_{2\frac{1}{2}}-35197_{1\frac{1}{2}}$	7	3278.762	2	*WA*	30490.530	$4322°_{2\frac{1}{2}}-34813_{2\frac{1}{2}}$	36
3258.247	1	*WA*	30682.502	$6549°_{2\frac{1}{2}}-37232_{1\frac{1}{2}}$	−27	3279.007	130	*PK*	30488.252	$5437°_{3\frac{1}{2}}-35925_{3\frac{1}{2}}$	−7
3258.874	90	*MT*	30676.599	$7293°_{6\frac{1}{2}}-37970_{5\frac{1}{2}}$	5					$4737°_{2\frac{1}{2}}-35225_{2\frac{1}{2}}$	−30
3259.787	20	*WA*	30668.007	$4266°_{3\frac{1}{2}}-34934_{2\frac{1}{2}}$	−18	3279.205	5	*WA*	30486.411	$5716°_{3\frac{1}{2}}-36202_{4\frac{1}{2}}$	71
3260.320	6	*WA*	30662.994	$8169°_{1\frac{1}{2}}-38832_{2\frac{1}{2}}$	−16	3279.841	180	*WA*	30480.500	$2382°_{4\frac{1}{2}}-32862_{3\frac{1}{2}}$	−20
3260.974	180	*AK*	30656.845	$8280°_{2\frac{1}{2}}-38937_{1\frac{1}{2}}$	−24	3280.484	70	*WA*	30474.525	$4459°_{3\frac{1}{2}}-34934_{2\frac{1}{2}}$	−25
				$8175°_{2\frac{1}{2}}-38832_{2\frac{1}{2}}$	0						
						3280.668	6	*MT*	30472.816		
3261.116	8	*WA*	30655.510	$8423_{6\frac{1}{2}}-39079°_{5\frac{1}{2}}$	−115	3281.095	40	*MT*	30468.851	$7061°_{0\frac{1}{2}}-37530_{1\frac{1}{2}}$	56
3261.238	10	*WA*	30654.363	$4266°_{3\frac{1}{2}}-34920_{3\frac{1}{2}}$	−27	3281.587	3	*MT*	30464.283	$15134_{4\frac{1}{2}}-45598°_{3\frac{1}{2}}$	32
3261.524	5	*WA*	30651.675	$2879°_{5\frac{1}{2}}-33531_{6\frac{1}{2}}$	−17	3281.951	6	*WA*	30460.904	$4459°_{3\frac{1}{2}}-34920_{3\frac{1}{2}}$	−11
3261.629	6	*PK*	30650.688	$7878°_{3\frac{1}{2}}-38529_{2\frac{1}{2}}$	−4	3281.996	6	*WA*	30460.486	$4737°_{2\frac{1}{2}}-35197_{1\frac{1}{2}}$	20
3262.138	8	*MT*	30645.906	$11387°_{3\frac{1}{2}}-42033_{2\frac{1}{2}}$	−17	3283.067	1	*WA*	30450.550	$3593°_{4\frac{1}{2}}-34044_{4\frac{1}{2}}$	−8
3263.070	8	*WA*	30637.153	$0°_{3\frac{1}{2}}-30637_{2\frac{1}{2}}$	−3	3283.175	8	*WA*	30449.549	$7202°_{2\frac{1}{2}}-37652_{2\frac{1}{2}}$	−12
3263.339	10	*WA*	30634.628	$7818°_{1\frac{1}{2}}-38452_{1\frac{1}{2}}$	25	3283.347	90	*WA*	30447.953	$7522°_{5\frac{1}{2}}-37970_{5\frac{1}{2}}$	43
3263.445	130	*MT*	30633.633	$8175°_{2\frac{1}{2}}-38809_{3\frac{1}{2}}$	20	3283.678	60	*PK*	30444.884	$2634°_{2\frac{1}{2}}-33079_{3\frac{1}{2}}$	38
3263.884	180	*MT*	30629.513	$3703°_{3\frac{1}{2}}-34333_{2\frac{1}{2}}$	9					$3363°_{2\frac{1}{2}}-33808_{2\frac{1}{2}}$	−5

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3284.218	40	*MT*	30439.879	$5118°_{2\,1/2}-35558_{3\,1/2}$	−16	3298.939	2	*MB*	30304.050	$8531_{3\,1/2}\ -38835°_{2\,1/2}$	−5
3284.422	10	*WA*	30437.988	$2641°_{3\,1/2}-33079_{3\,1/2}$	35	3299.024	7	*MB*	30303.269	$15859_{4\,1/2}\ -46162°_{4\,1/2}$	−59
3284.606	12	*WA*	30436.283	$5675°_{4\,1/2}-36112_{3\,1/2}$	25	3299.164	5	*MB*	30301.983	$4511°_{2\,1/2}-34813_{2\,1/2}$	39
3285.214	300	*WA*	30430.650	$3995°_{3\,1/2}-34426_{2\,1/2}$	74	3299.816	5	*MB*	30295.996		
3285.786	5	*WA*	30425.353	$0°_{3\,1/2}-30425_{2\,1/2}$	4	3299.989	90	*WA*	30294.408	$6549°_{2\,1/2}-36844_{2\,1/2}$	11
3285.864	1	*WA*	30424.631	$7713°_{4\,1/2}-38137_{5\,1/2}$	38	3300.151	200	*AK*	30292.921	$5819°_{4\,1/2}-36112_{3\,1/2}$	13
3286.029	90	*MT*	30423.103	$4511°_{2\,1/2}-34934_{2\,1/2}$	−62	3300.443	7	*MB*	30290.241		
3286.216	8	*WA*	30421.372	$5716°_{3\,1/2}-36137_{2\,1/2}$	−15	3300.720	7	*MB*	30287.699		
3286.379	10	*WA*	30419.863	$2382°_{4\,1/2}-32802_{5\,1/2}$	−55	3300.953	20	*MB*	30285.561	$6638°_{4\,1/2}-36923_{4\,1/2}$	30
3286.676	8	*WA*	30417.114	$2879°_{5\,1/2}-33296_{4\,1/2}$	5	3301.094	2	*MB*	30284.268		
3286.828	8	*WA*	30415.708	$2634°_{2\,1/2}-33050_{1\,1/2}$	83	3301.227	18	*MB*	30283.048	$8169°_{1\,1/2}-38452_{1\,1/2}$	−3
3287.396	2	*PK*	30410.453	$2634°_{2\,1/2}-33045_{2\,1/2}$	24	3301.341	2	*MB*	30282.002	$7522°_{0\,1/2}-37804_{1\,1/2}$	26
3287.790	6	*WA*	30406.808	$8402°_{3\,1/2}-38809_{3\,1/2}$	1	3301.796	2	*MB*	30277.829		
3287.882	20	*MB*	30405.958	$4523°_{4\,1/2}-34928_{4\,1/2}$	22	3301.900	20	*MB*	30276.876	$8175°_{2\,1/2}-38452_{1\,1/2}$	−10
3288.145	20	*MB*	30403.526	$2641°_{3\,1/2}-33045_{2\,1/2}$	−9	3302.509	2	*MB*	30271.292	$15593_{6\,1/2}\ -45864°_{5\,1/2}$	3
3288.202	25	*MB*	30402.999	$14727_{1\,1/2}\ -45130°_{2\,1/2}$	10	3302.590	2	*MB*	30270.550		
3288.346	15	*MB*	30401.667	$12057°_{2\,1/2}-42458_{1\,1/2}$	32	3302.913	20	*MB*	30267.590	$9771_{7\,1/2}\ -40039°_{6\,1/2}$	22
3288.770	40	*MT*	30397.748	$4523°_{4\,1/2}-34920_{3\,1/2}$	−6	3303.137	2	*MB*	30265.538		
3288.938	5	*MB*	30396.195	$10114°_{2\,1/2}-40511_{1\,1/2}$	−48	3303.219	25	*MB*	30264.786	$1873°_{3\,1/2}-32138_{2\,1/2}$	22
3289.279	25	*MB*	30393.044	$7259°_{3\,1/2}-37652_{2\,1/2}$	29	3303.670	8	*WA*	30260.655	$7713°_{4\,1/2}-37973_{3\,1/2}$	−31
3289.523	10	*MB*	30390.790	$14739_{2\,1/2}\ -45130°_{2\,1/2}$	22	3303.765	18	*MB*	30259.785	$5942°_{3\,1/2}-36202_{4\,1/2}$	26
3290.040	3	*WA*	30386.014	$7202°_{2\,1/2}-37588_{3\,1/2}$	71	3304.021	10	*MB*	30257.440	$7713°_{4\,1/2}-37970_{5\,1/2}$	−2
3290.327	90	*MB*	30383.364	$3593°_{4\,1/2}-33977_{3\,1/2}$	103	3304.132	10	*MB*	30256.424	$4511°_{2\,1/2}-34767_{1\,1/2}$	−9
3290.577	40	*WA*	30381.056	$4844°_{1\,1/2}-35225_{2\,1/2}$	44	3304.487	2	*MB*	30253.173		
3291.751	2	*MB*	30370.221	$5437°_{3\,1/2}-35807_{4\,1/2}$	75	3304.648	7	*WA*	30251.699	$7278°_{1\,1/2}-37530_{1\,1/2}$	−11
3292.001	10	*WA*	30367.915	$3508°_{0\,1/2}-33876_{1\,1/2}$	8	3304.805	25	*MB*	30250.262		
3292.100	7	*MB*	30367.001	$2140°_{0\,1/2}-32507_{1\,1/2}$	52	3304.843	220	*WA*	30249.915	$5675°_{4\,1/2}-35925_{3\,1/2}$	−3
3292.302	5	*MB*	30365.138	$10924°_{4\,1/2}-41289_{5\,1/2}$	44	3305.041	25	*MB*	30248.103	$8280°_{2\,1/2}-38529_{2\,1/2}$	28
3292.368	5	*MB*	30364.529	$5924°_{1\,1/2}-36288_{0\,1/2}$	75	3305.331	10	*MB*	30245.449		
3292.551	2	*MB*	30362.842			3305.519	2	*MB*	30243.728		
3292.925	25	*MB*	30359.394	$15803_{4\,1/2}\ -46162°_{4\,1/2}$	12	3305.585	2	*MB*	30243.125		
3293.580	40	*MB*	30353.356	$4459°_{3\,1/2}-34813_{2\,1/2}$	27	3306.045	20	*MB*	30238.917	$2563°_{5\,1/2}-32802_{5\,1/2}$	−14
3294.416	5	*MB*	30345.654			3306.180	15	*MB*	30237.682	$5964°_{3\,1/2}-36202_{4\,1/2}$	21
3294.606	15	*MT*	30343.904	$6549°_{2\,1/2}-36893_{3\,1/2}$	42	3306.438	10	*MB*	30235.323	$8702°_{1\,1/2}-38937_{1\,1/2}$	−48
3294.926	25	*MB*	30340.957			3306.637	130	*WA*	30233.503	$5969°_{5\,1/2}-36202_{4\,1/2}$	−46
3294.948	20	*WA*	30340.754	$3703°_{3\,1/2}-34044_{4\,1/2}$	−92	3306.750	5	*MB*	30232.470		
3295.167	10	*MB*	30338.738			3307.225	130	*MB*	30228.128	$2634°_{2\,1/2}-32862_{3\,1/2}$	27
3295.285	220	*WA*	30337.652	$3995°_{3\,1/2}-34333_{2\,1/2}$	14	3307.293	7	*MB*	30227.507	$5118°_{2\,1/2}-35346_{3\,1/2}$	31
3296.172	130	*MB*	30329.488	$7259°_{3\,1/2}-37588_{3\,1/2}$	90	3307.985	50	*MB*	30221.184	$9634°_{1\,1/2}-39855_{0\,1/2}$	−28
3296.483	1	*WA*	30326.627	$6517°_{2\,1/2}-36844_{2\,1/2}$	−58					$2641°_{3\,1/2}-32862_{3\,1/2}$	−23
3296.574	12	*MB*	30325.790			3308.014	140	*MB*	30220.918	$2581°_{4\,1/2}-32802_{5\,1/2}$	11
3296.763	15	*WA*	30324.051	$1873°_{3\,1/2}-32197_{4\,1/2}$	3	3308.077	40	*MB*	30220.343	$987°_{4\,1/2}-31207_{3\,1/2}$	27
3296.876	180	*WA*	30323.012	$6521°_{1\,1/2}-36844_{2\,1/2}$	39	3308.371	2	*MB*	30217.658	$3593°_{4\,1/2}-33811_{4\,1/2}$	−26
3297.663	12	*MB*	30315.775			3308.514	2	*MB*	30216.351		
3297.896	5	*MB*	30313.634			3308.570	2	*MB*	30215.840		
3297.952	15	*MB*	30313.119	$12260°_{3\,1/2}-42573_{3\,1/2}$	16	3308.688	15	*MB*	30214.763	$5010°_{2\,1/2}-35225_{2\,1/2}$	−22
3298.074	2	*MB*	30311.998			3308.840	12	*MB*	30213.375	$5924°_{1\,1/2}-36137_{2\,1/2}$	−24
3298.251	10	*MB*	30310.371			3308.978	5	*MB*	30212.115		
3298.344	30	*WA*	30309.516	$4203°_{6\,1/2}-34513_{6\,1/2}$	−17	3309.132	20	*WA*	30210.709	$3363°_{2\,1/2}-33574_{1\,1/2}$	−8
3298.595	2	*MB*	30307.210			3309.265	90	*MB*	30209.495	$5716°_{3\,1/2}-35925_{3\,1/2}$	29

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3309.500	12	*MB*	30207.349	$12365°_{4\,1/2}-42573_{3\,1/2}$	−35	3320.222	12	*MB*	30109.804	$2382°_{4\,1/2}-32492_{5\,1/2}$	12
3309.822	2	*MB*	30204.411			3320.426	40	*WA*	30107.954	$3703°_{3\,1/2}-33811_{4\,1/2}$	−18
3309.842	18	*MB*	30204.228	$9634°_{1\,1/2}-39838_{2\,1/2}$	−30	3320.553	20	*WA*	30106.803	$5118°_{2\,1/2}-35225_{2\,1/2}$	−46
3310.288	2	*MB*	30200.159			3320.781	30	*MB*	30104.736	$3703°_{3\,1/2}-33808_{2\,1/2}$	13
3310.585	2	*MB*	30197.450			3320.931	30	*MB*	30103.376	$4322°_{2\,1/2}-34426_{2\,1/2}$	47
3310.630	18	*MB*	30197.039	$4737°_{2\,1/2}-34934_{2\,1/2}$	−10	3321.247	2	*MB*	30100.512		
3310.665	2	*MB*	30196.720	$9198°_{3\,1/2}-39394_{3\,1/2}$	53	3321.276	15	*MB*	30100.249	$8169°_{1\,1/2}-38269_{0\,1/2}$	−26
3310.734	2	*MB*	30196.091			3321.559	5	*MB*	30097.685		
3310.875	40	*MB*	30194.805	$5942°_{3\,1/2}-36137_{2\,1/2}$	0	3321.804	5	*MB*	30095.465	$7878°_{3\,1/2}-37973_{3\,1/2}$	17
3311.395	25	*MB*	30190.063	$8702°_{1\,1/2}-38892_{0\,1/2}$	7	3322.258	5	*MB*	30091.352	$5716°_{3\,1/2}-35807_{4\,1/2}$	1
3311.492	130	*MB*	30189.179	$3363°_{2\,1/2}-33552_{2\,1/2}$	24	3322.315	12	*MB*	30090.836		
3311.732	10	*WA*	30186.991	$5010°_{2\,1/2}-35197_{1\,1/2}$	22	3322.527	5	*MB*	30088.916		
3311.770	2	*MB*	30186.645			3322.628	20	*MB*	30088.002	$987°_{4\,1/2}-31075_{4\,1/2}$	10
3312.191	20	*MB*	30182.808			3322.818	2	*MB*	30086.281		
3312.216	180	*MB*	30182.580	$8896_{5\,1/2}-39079°_{5\,1/2}$	12	3322.867	2	*MB*	30085.837		
3312.322	2	*MB*	30181.615			3322.921	12	*MB*	30085.349	$11015_{3\,1/2}-41100°_{2\,1/2}$	−3
3313.001	2	*MB*	30175.429			3323.023	2	*MB*	30084.425	$11949°_{3\,1/2}-42033_{2\,1/2}$	−40
3313.101	2	*MB*	30174.518			3323.153	10	*WA*	30083.248	$7259°_{3\,1/2}-37342_{2\,1/2}$	−3
3313.297	60	*MB*	30172.733	$5964°_{3\,1/2}-36137_{2\,1/2}$	26	3323.290	25	*MB*	30082.008	$2634°_{2\,1/2}-32716_{2\,1/2}$	27
3313.400	5	*MB*	30171.795	$8280°_{2\,1/2}-38452_{1\,1/2}$	−8	3323.441	5	*MB*	30080.641		
3313.529	25	*MB*	30170.621	$7061°_{0\,1/2}-37232_{1\,1/2}$	21	3323.465	18	*MB*	30080.424		
3313.684	10	*MB*	30169.210	$5942°_{3\,1/2}-36112_{3\,1/2}$	−12	3323.616	1	*WA*	30079.058	$5118°_{2\,1/2}-35197_{1\,1/2}$	24
3313.793	15	*MB*	30168.217			3323.695	2	*MB*	30078.343		
3314.025	90	*MB*	30166.105	$17300°_{3\,1/2}-47466_{2\,1/2}$	−29	3323.976	10	*MB*	30075.800	$4737°_{2\,1/2}-34813_{2\,1/2}$	−28
				$0°_{3\,1/2}-30166_{3\,1/2}$	49	3324.766	40	*MB*	30068.654	$15529_{2\,1/2}-45598°_{3\,1/2}$	−70
3314.712	220	*MB*	30159.853	$3995°_{3\,1/2}-34155_{3\,1/2}$	3	3324.985	25	*MT*	30066.674	$4266°_{3\,1/2}-34333_{2\,1/2}$	−26
3314.731	40	*MB*	30159.681	$4266°_{3\,1/2}-34426_{2\,1/2}$	41	3325.055	40b	*MB*	30066.041	$3593°_{4\,1/2}-33659_{5\,1/2}$	−44
3314.947	12	*WA*	30157.716	$1410°_{4\,1/2}-31568_{4\,1/2}$	1	3325.151	35	*MB*	30065.173	$0°_{3\,1/2}-30065_{3\,1/2}$	9
3315.110	40	*MB*	30156.233	$5651°_{5\,1/2}-35807_{4\,1/2}$	22	3325.331	160	*MB*	30063.545	$8131_{4\,1/2}-38194°_{4\,1/2}$	34
3315.154	5	*MB*	30155.833	$13012°_{2\,1/2}-43167_{1\,1/2}$	48	3325.403	25	*MB*	30062.894	$3745°_{1\,1/2}-33808_{2\,1/2}$	53
3315.539	2	*MB*	30152.331			3326.075	60	*MB*	30056.820	$10454°_{1\,1/2}-40511_{1\,1/2}$	−34
3315.971	1	*WA*	30148.403	$1410°_{4\,1/2}-31558_{3\,1/2}$	81	3326.940	30	*MB*	30049.006	$3995°_{3\,1/2}-34044_{4\,1/2}$	25
3316.111	5	*MB*	30147.130	$5964°_{3\,1/2}-36112_{3\,1/2}$	5	3327.222	50	*MB*	30046.460	$3363°_{2\,1/2}-33409_{3\,1/2}$	−9
3316.344	7	*MB*	30145.012			3327.627	30	*MB*	30042.803	$16545_{5\,1/2}-46588°_{5\,1/2}$	−58
3316.704	2	*MB*	30141.740			3327.656	40	*MB*	30042.541	$2595°_{1\,1/2}-32638_{1\,1/2}$	20
3316.983	10	*MB*	30139.205	$8402°_{3\,1/2}-38541_{4\,1/2}$	0	3327.901	60	*MB*	30040.329	$5675°_{4\,1/2}-35716_{5\,1/2}$	9
3317.221	5	*MB*	30137.043	$7059°_{4\,1/2}-37196_{4\,1/2}$	−23	3328.099	2	*MB*	30038.542		
3317.263	2	*MB*	30136.661	$19481_{4\,1/2}-49617°_{5\,1/2}$	1	3328.543	20	*MB*	30034.535		
3317.351	5	*MB*	30135.862			3328.598	25	*MB*	30034.039		
3317.761	25	*MB*	30132.138			3328.757	7	*MB*	30032.605		
3317.791	180	*MB*	30131.865	$5675°_{4\,1/2}-35807_{4\,1/2}$	61	3328.926	35	*MB*	30031.080	$2382°_{4\,1/2}-32413_{3\,1/2}$	−19
3317.861	10	*MB*	30131.230	$4201°_{1\,1/2}-34333_{2\,1/2}$	25	3329.000	130	*MB*	30030.412	$7818°_{1\,1/2}-37848_{2\,1/2}$	10
3317.901	15	*WA*	30130.866	$3745°_{1\,1/2}-33876_{1\,1/2}$	−35	3329.047	35	*MB*	30029.988	$7202°_{2\,1/2}-37232_{1\,1/2}$	80
3317.962	2	*MB*	30130.312	$8702°_{1\,1/2}-38832_{2\,1/2}$	48	3329.148	25	*MB*	30029.077	$4266°_{3\,1/2}-34295_{4\,1/2}$	24
3318.396	18	*MB*	30126.372	$8402°_{3\,1/2}-38529_{2\,1/2}$	19	3329.519	10	*MB*	30025.731		
3318.527	2	*MB*	30125.183			3330.378	40	*MB*	30017.987	$4910°_{5\,1/2}-34928_{4\,1/2}$	−18
3318.950	70	*MB*	30121.343	$14827_{3\,1/2}-44949°_{4\,1/2}$	−44	3330.485	70	*WA*	30017.023	$7061°_{0\,1/2}-37078_{1\,1/2}$	−17
3318.977	50	*MB*	30121.098	$2595°_{1\,1/2}-32716_{2\,1/2}$	96	3331.010	10	*MB*	30012.292		
3319.610	2	*MB*	30115.355			3331.224	40	*MB*	30010.364	$4322°_{2\,1/2}-34333_{2\,1/2}$	−25
3319.740	2	*MB*	30114.176			3331.789	40	*MB*	30005.275	$8804°_{4\,1/2}-38809_{3\,1/2}$	23

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3332.464	20	*MB*	29999.198	$6517°_{2\,1/2}-36516_{1\,1/2}$	19	3343.174	10	*MB*	29903.097		
3332.644	20	*MB*	29997.577			3343.557	15	*MB*	29899.672	$10820_{2\,1/2}\ -40720°_{1\,1/2}$	36
3332.732	12	*MB*	29996.785			3343.853	300	*MB*	29897.025	$5819°_{4\,1/2}-35716_{5\,1/2}$	55
3332.877	35	*MB*	29995.480	$6521°_{1\,1/2}-36516_{1\,1/2}$	15	3344.070	15	*MB*	29895.085		
3333.037	90	*WA*	29994.041	$0°_{3\,1/2}-29994_{2\,1/2}$	0	3344.321	40	*WA*	29892.842	$11165_{8\,1/2}\ -41058°_{7\,1/2}$	24
3333.229	15	*MB*	29992.313	$12466°_{1\,1/2}-42458_{1\,1/2}$	0	3344.760	400	*AK*	29888.918	$4266°_{3\,1/2}-34155_{3\,1/2}$	4
3333.300	75	*MB*	29991.674			3344.848	10	*MB*	29888.132		
3333.630	20	*MB*	29988.705			3345.064	2	*MB*	29886.202		
3333.660	90	*WA*	29988.435	$5819°_{4\,1/2}-35807_{4\,1/2}$	−19	3345.814	10	*MB*	29879.503		
3333.895	60	*MB*	29986.322	$7818°_{1\,1/2}-37804_{1\,1/2}$	35	3345.951	15	*MB*	29878.280		
3334.272	50	*MB*	29982.931	$5942°_{3\,1/2}-35925_{3\,1/2}$	47	3346.019	2	*MB*	29877.672	$18147°_{2\,1/2}-48024_{2\,1/2}$	2
3334.422	25	*MB*	29981.582	$3995°_{3\,1/2}-33977_{3\,1/2}$	−97	3346.162	30	*MB*	29876.396	$7202°_{2\,1/2}-37078_{1\,1/2}$	46
3334.451	180	*MB*	29981.322	$10058_{6\,1/2}\ -40039°_{6\,1/2}$	24	3346.400	20	*MB*	29874.271		
3334.876	30	*MB*	29977.501	$1873°_{3\,1/2}-31851_{2\,1/2}$	38	3346.512	90	*MB*	29873.271	$4459°_{3\,1/2}-34333_{2\,1/2}$	45
3334.975	2	*MB*	29976.611	$12057°_{2\,1/2}-42033_{2\,1/2}$	63	3346.613	10	*MB*	29872.369		
3335.682	40	*MB*	29970.258	$7878°_{3\,1/2}-37848_{2\,1/2}$	36	3346.916	10	*WA*	29869.665	$10641°_{2\,1/2}-40511_{1\,1/2}$	−19
3335.867	15	*MB*	29968.596	$4844°_{1\,1/2}-34813_{2\,1/2}$	38	3347.225	2	*MB*	29866.908		
3336.054	20	*MB*	29966.916	$6549°_{2\,1/2}-36516_{1\,1/2}$	26	3347.466	40	*MB*	29864.758	$5942°_{3\,1/2}-35807_{4\,1/2}$	−11
3336.136	20	*MB*	29966.179	$4459°_{3\,1/2}-34426_{2\,1/2}$	15					$7059°_{4\,1/2}-36923_{4\,1/2}$	41
3336.178	15	*MB*	29965.802			3348.190	8	*MT*	29858.300	$13784°_{1\,1/2}-43643_{0\,1/2}$	−95
3336.361	50	*MB*	29964.159	$4201°_{1\,1/2}-34166_{1\,1/2}$	13	3348.261	2	*MB*	29857.667	$11340°_{3\,1/2}-41198_{2\,1/2}$	−43
3336.543	40	*MB*	29962.524	$7233°_{5\,1/2}-37196_{4\,1/2}$	12	3348.696	2	*MB*	29853.789		
3336.744	30	*WA*	29960.719	$5964°_{3\,1/2}-35925_{3\,1/2}$	−66	3349.131	2	*MB*	29849.911		
3337.550	10	*MB*	29953.484	$19136°_{2\,1/2}-49089_{2\,1/2}$	22	3349.190	2	*MB*	29849.385		
				$7278°_{1\,1/2}-37232_{1\,1/2}$	−31	3349.512	12	*MB*	29846.516		
3337.839	20	*MB*	29950.891	$19138°_{1\,1/2}-49089_{2\,1/2}$	−60	3349.873	20	*MB*	29843.299	$4322°_{2\,1/2}-34166_{1\,1/2}$	−31
3337.950	10	*MB*	29949.895			3349.958	90	*MB*	29842.542	$5716°_{3\,1/2}-35558_{3\,1/2}$	56
3338.416	5	*MB*	29945.714			3349.987	40	*WA*	29842.284	$7746°_{2\,1/2}-37588_{3\,1/2}$	−3
3338.467	12	*MB*	29945.257			3350.070	12	*MB*	29841.544	$987°_{4\,1/2}-30829_{3\,1/2}$	32
3338.527	10	*MB*	29944.719	$13515°_{3\,1/2}-43460_{2\,1/2}$	39	3350.166	2	*MB*	29840.690		
3338.647	7	*MB*	29943.642			3350.403	7	*MB*	29838.579	$5969°_{5\,1/2}-35807_{4\,1/2}$	18
3338.744	7	*MB*	29942.773			3350.676	25	*MB*	29836.148	$10035°_{5\,1/2}-39871_{4\,1/2}$	26
3338.894	5	*MB*	29941.427			3350.737	35	*MB*	29835.604	$4459°_{3\,1/2}-34295_{4\,1/2}$	27
3339.071	5	*MB*	29939.840			3350.835	20	*MB*	29834.732	$7059°_{4\,1/2}-36893_{3\,1/2}$	34
3339.344	10	*MB*	29937.393	$18393_{3\,1/2}\ -48330°_{3\,1/2}$	−69	3350.921	40	*MB*	29833.966	$7818°_{1\,1/2}-37652_{2\,1/2}$	23
3339.505	90	*MB*	29935.949	$2382°_{4\,1/2}-32318_{3\,1/2}$	21	3351.070	40	*MB*	29832.640	$4322°_{2\,1/2}-34155_{3\,1/2}$	37
3339.794	60	*MB*	29933.359	$10924°_{4\,1/2}-40858_{4\,1/2}$	30	3351.132	20	*WA*	29832.088	$2581°_{4\,1/2}-32413_{3\,1/2}$	0
3340.244	2	*MB*	29929.327			3351.513	45	*MB*	29828.697	$3745°_{1\,1/2}-33574_{1\,1/2}$	27
3340.301	30	*MB*	29928.816	$2563°_{5\,1/2}-32492_{5\,1/2}$	11	3351.746	25	*MB*	29826.623	$8702°_{1\,1/2}-38529_{2\,1/2}$	46
3340.881	70	*MB*	29923.620	$5010°_{2\,1/2}-34934_{2\,1/2}$	67	3352.275	90b	*MB*	29821.917	$4511°_{2\,1/2}-34333_{2\,1/2}$	78
						3352.347	15	*MB*	29821.276		
3341.005	35	*MB*	29922.510	$2879°_{5\,1/2}-32802_{5\,1/2}$	40	3352.938	90	*MB*	29816.020	$3593°_{4\,1/2}-33409_{3\,1/2}$	5
3341.262	5	*MB*	29920.208			3352.979	60	*MB*	29815.655	$5118°_{2\,1/2}-34934_{2\,1/2}$	38
3341.604	7	*MB*	29917.146			3353.058	10	*MB*	29814.953	$15134_{4\,1/2}\ -44949°_{4\,1/2}$	−7
3341.655	15	*MB*	29916.690	$8278_{5\,1/2}\ -38194°_{4\,1/2}$	16	3353.207	15	*MB*	29813.628		
3341.863	220	*MB*	29914.827	$4511°_{2\,1/2}-34426_{2\,1/2}$	48						
						3353.318	70	*MB*	29812.641	$6389°_{4\,1/2}-36202_{4\,1/2}$	26
3342.197	30	*MB*	29911.838	$2595°_{1\,1/2}-32507_{1\,1/2}$	40	3353.553	20	*MB*	29810.552	$12762°_{4\,1/2}-42573_{3\,1/2}$	2
3342.312	20	*WA*	29910.809	$2581°_{4\,1/2}-32492_{5\,1/2}$	28					$11387°_{3\,1/2}-41198_{2\,1/2}$	−25
3342.525	35	*MB*	29908.903	$0°_{3\,1/2}-29908_{4\,1/2}$	0	3353.824	25	*MB*	29808.143		
3342.854	10	*MB*	29905.959	$7746°_{2\,1/2}-37652_{2\,1/2}$	54	3353.942	60	*MB*	29807.095	$3745°_{1\,1/2}-33552_{2\,1/2}$	−11
3342.996	7	*MB*	29904.689							$0°_{3\,1/2}-29807_{3\,1/2}$	17

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
						3366.552	220b	*AK*	29695.451	$4459°_{3\frac{1}{2}} - 34155_{3\frac{1}{2}}$	12
3354.430	25	*MB*	29802.759			3366.673	25	*MB*	29694.383	$5118°_{2\frac{1}{2}} - 34813_{2\frac{1}{2}}$	−12
3354.487	10	*MB*	29802.252	$5010°_{2\frac{1}{2}} - 34813_{2\frac{1}{2}}$	−79	3367.022	5	*MB*	29691.306	$7202°_{2\frac{1}{2}} - 36893_{3\frac{1}{2}}$	65
3354.516	45	*MB*	29801.995	$5118°_{2\frac{1}{2}} - 34920_{3\frac{1}{2}}$	13	3367.082	12	*MB*	29690.777		
3354.982	25	*MB*	29797.855	$8175°_{2\frac{1}{2}} - 37973_{3\frac{1}{2}}$	−57	3367.152	25	*MB*	29690.159	$7233°_{5\frac{1}{2}} - 36923_{4\frac{1}{2}}$	−2
3355.012	180	*MB*	29797.589	$7818°_{1\frac{1}{2}} - 37615_{0\frac{1}{2}}$	2	3367.275	45	*MB*	29689.075		
				$1410°_{4\frac{1}{2}} - 31207_{3\frac{1}{2}}$	−33	3367.316	30	*WA*	29688.713	$4737°_{2\frac{1}{2}} - 34426_{2\frac{1}{2}}$	50
3355.223	20	*MB*	29795.715			3367.525	25	*MB*	29686.871	$3363°_{2\frac{1}{2}} - 33050_{1\frac{1}{2}}$	7
3355.359	10	*MB*	29794.507	$0°_{3\frac{1}{2}} - 29794_{3\frac{1}{2}}$	−9	3367.742	12	*MB*	29684.958	$13027_{6\frac{1}{2}} - 42712°_{6\frac{1}{2}}$	−93
3355.415	7	*MB*	29794.010			3367.774	35	*MB*	29684.676	$1873°_{3\frac{1}{2}} - 31558_{3\frac{1}{2}}$	−15
3356.071	25	*MB*	29788.186	$5437°_{3\frac{1}{2}} - 35225_{2\frac{1}{2}}$	−47	3367.873	15	*MB*	29683.803	$14739_{2\frac{1}{2}} - 44423°_{1\frac{1}{2}}$	−10
3356.390	50	*MB*	29785.355			3367.906	5	*MB*	29683.513	$2634°_{2\frac{1}{2}} - 32318_{3\frac{1}{2}}$	4
3356.410	100	*MB*	29785.178	$3363°_{2\frac{1}{2}} - 33148_{2\frac{1}{2}}$	16	3368.117	30	*MB*	29681.653	$3854_{3\frac{1}{2}} - 33535°_{3\frac{1}{2}}$	29
3356.759	40	*MB*	29782.081	$9053_{3\frac{1}{2}} - 38835°_{2\frac{1}{2}}$	−23					$3363°_{2\frac{1}{2}} - 33045_{2\frac{1}{2}}$	−14
3357.215	220	*MT*	29778.036	$4266°_{3\frac{1}{2}} - 34044_{4\frac{1}{2}}$	−7	3368.346	10	*MB*	29679.635		
3357.421	35	*MB*	29776.209	$15822_{3\frac{1}{2}} - 45598°_{3\frac{1}{2}}$	−32	3368.368	40	*PK*	29679.441	$1410°_{4\frac{1}{2}} - 31089_{5\frac{1}{2}}$	15
3357.722	30	*MB*	29773.540	$12260°_{3\frac{1}{2}} - 42033_{2\frac{1}{2}}$	−26	3368.606	12	*MB*	29677.344		
3357.849	25	*MB*	29772.414	$4523°_{4\frac{1}{2}} - 34295_{4\frac{1}{2}}$	−2	3368.689	50	*MB*	29676.613	$2641°_{3\frac{1}{2}} - 32318_{3\frac{1}{2}}$	−2
3357.920	20	*WA*	29771.784	$2641°_{3\frac{1}{2}} - 32413_{3\frac{1}{2}}$	−2	3368.790	40b	*MB*	29675.724	$13784°_{1\frac{1}{2}} - 43460_{2\frac{1}{2}}$	25
3358.083	10	*MB*	29770.339			3368.930	25	*MB*	29674.490	$4201°_{1\frac{1}{2}} - 33876_{1\frac{1}{2}}$	6
3358.423	35	*MB*	29767.326	$6521°_{1\frac{1}{2}} - 36288_{0\frac{1}{2}}$	0	3369.041	45	*MB*	29673.513	$7522°_{5\frac{1}{2}} - 37196_{4\frac{1}{2}}$	−4
3358.490	40	*MB*	29766.732	$10088°_{1\frac{1}{2}} - 39855_{0\frac{1}{2}}$	−26	3369.221	5	*MB*	29671.927		
3358.630	2	*MB*	29765.491	$14315°_{0\frac{1}{2}} - 44081_{1\frac{1}{2}}$	48	3369.382	50	*MB*	29670.510	$5675°_{4\frac{1}{2}} - 35346_{3\frac{1}{2}}$	−8
3358.692	5	*MB*	29764.941			3369.582	12	*MB*	29668.749	$3508°_{0\frac{1}{2}} - 33177_{0\frac{1}{2}}$	23
3360.346	20	*MB*	29750.291	$8702°_{1\frac{1}{2}} - 38452_{1\frac{1}{2}}$	−14	3369.672	2	*MT*	29667.956	$9269°_{0\frac{1}{2}} - 38937_{1\frac{1}{2}}$	−33
3360.401	25	*MB*	29749.805	$10088°_{1\frac{1}{2}} - 39838_{2\frac{1}{2}}$	0	3369.744	30	*MB*	29667.322	$19950_{6\frac{1}{2}} - 49617°_{5\frac{1}{2}}$	−37
3360.538	180	*MB*	29748.592	$11309_{7\frac{1}{2}} - 41058°_{7\frac{1}{2}}$	−49	3369.976	25	*MB*	29665.280	$1410°_{4\frac{1}{2}} - 31075_{4\frac{1}{2}}$	−18
3360.708	30	*MB*	29747.087	$5969°_{5\frac{1}{2}} - 35716_{5\frac{1}{2}}$	11	3370.040	60	*MB*	29664.717	$7259°_{3\frac{1}{2}} - 36923_{4\frac{1}{2}}$	3
3360.783	2	*MB*	29746.423			3370.558	2	*MB*	29660.158		
3360.990	20	*MB*	29744.591	$11340°_{3\frac{1}{2}} - 41085_{3\frac{1}{2}}$	−24	3370.699	7	*MB*	29658.917		
3361.217	12	*MB*	29742.582	$4165_{4\frac{1}{2}} - 33908°_{4\frac{1}{2}}$	−60	3371.169	180	*MB*	29654.782	$4511°_{2\frac{1}{2}} - 34166_{1\frac{1}{2}}$	1
3361.555	50	*MB*	29739.592	$5819°_{4\frac{1}{2}} - 35558_{3\frac{1}{2}}$	3	3371.206	15	*MB*	29654.457	$4322°_{2\frac{1}{2}} - 33977_{3\frac{1}{2}}$	25
3361.744	40	*MB*	29737.920			3371.839	40	*MB*	29648.890	$5118°_{2\frac{1}{2}} - 34767_{1\frac{1}{2}}$	5
3361.767	100	*MB*	29737.717	$3793°_{6\frac{1}{2}} - 33531_{6\frac{1}{2}}$	−36	3372.388	20	*MB*	29644.064	$4511°_{2\frac{1}{2}} - 34155_{3\frac{1}{2}}$	10
3361.858	45	*MB*	29736.912	$2581°_{4\frac{1}{2}} - 32318_{3\frac{1}{2}}$	−5	3372.647	20	*MB*	29641.787	$7202°_{2\frac{1}{2}} - 36844_{2\frac{1}{2}}$	11
3362.067	7	*MB*	29735.063			3372.792	20	*MB*	29640.513		
3362.347	12	*MB*	29732.587			3372.903	2	*MB*	29639.537		
3363.027	2	*MB*	29726.575			3373.020	2	*MB*	29638.509		
3363.371	30	*MB*	29723.535	$10114°_{2\frac{1}{2}} - 39838_{2\frac{1}{2}}$	−26	3373.246	2	*MB*	29636.524		
3363.535	35	*MB*	29722.086	$6389°_{4\frac{1}{2}} - 36112_{3\frac{1}{2}}$	7	3373.362	20	*MB*	29635.505	$19982_{4\frac{1}{2}} - 49617°_{5\frac{1}{2}}$	−7
3363.899	2	*WA*	29718.870	$2595°_{1\frac{1}{2}} - 32314_{0\frac{1}{2}}$	45	3373.450	180	*MB*	29634.731	$8169°_{1\frac{1}{2}} - 37804_{1\frac{1}{2}}$	−4
3364.336	90	*MB*	29715.010	$987°_{4\frac{1}{2}} - 30702_{4\frac{1}{2}}$	11					$2563°_{5\frac{1}{2}} - 32197_{4\frac{1}{2}}$	−17
3364.621	50	*WA*	29712.493	$7818°_{1\frac{1}{2}} - 37530_{1\frac{1}{2}}$	7	3373.727	180	*MB*	29632.298	$4523°_{4\frac{1}{2}} - 34155_{3\frac{1}{2}}$	21
3364.818	50	*PK*	29710.753	$4266°_{3\frac{1}{2}} - 33977_{3\frac{1}{2}}$	10	3373.849	10	*MB*	29631.227		
3364.892	20	*MB*	29710.100	$7878°_{3\frac{1}{2}} - 37588_{3\frac{1}{2}}$	−44	3373.978	40	*MB*	29630.094	$5716°_{3\frac{1}{2}} - 35346_{3\frac{1}{2}}$	28
3365.137	20	*MB*	29707.937			3374.151	50	*MB*	29628.575	$8175°_{2\frac{1}{2}} - 37804_{1\frac{1}{2}}$	4
3365.322	50	*MB*	29706.304	$3703°_{3\frac{1}{2}} - 33409_{3\frac{1}{2}}$	1	3374.608	30	*MB*	29624.563		
3365.518	2	*MB*	29704.574			3374.819	30	*MB*	29622.711	$9269°_{0\frac{1}{2}} - 38892_{0\frac{1}{2}}$	36
3365.706	35	*MB*	29702.914	$3593°_{4\frac{1}{2}} - 33296_{4\frac{1}{2}}$	−8	3375.127	45	*MB*	29620.007	$6517°_{2\frac{1}{2}} - 36137_{2\frac{1}{2}}$	23
3365.823	50	*MB*	29701.882	$13758°_{1\frac{1}{2}} - 43460_{2\frac{1}{2}}$	19	3375.240	25	*MB*	29619.016		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3375.303	25	*MB*	29618.463			3384.122	10	*MB*	29541.280		
3375.502	35	*MB*	29616.717	$2581°_{4\,1/2}-32197_{4\,1/2}$	−7	3384.632	12	*MB*	29536.829		
3375.556	30	*MB*	29616.243	$6521°_{1\,1/2}-36137_{2\,1/2}$	−28	3384.756	30	*MB*	29535.747	$6389°_{4\,1/2}-35925_{3\,1/2}$	7
3375.592	30	*MB*	29615.927	$5942°_{3\,1/2}-35558_{3\,1/2}$	23	3385.057	25	*MB*	29533.120	$5924°_{1\,1/2}-35457_{1\,1/2}$	7
3375.770	70	*MB*	29614.366	$8927°_{5\,1/2}-38541_{4\,1/2}$	7						
3375.826	10	*MB*	29613.874			3385.153	5	*MB*	29532.283		
3376.002	20	*MB*	29612.331	$2879°_{5\,1/2}-32492_{5\,1/2}$	−11	3385.743	25	*MB*	29527.137	$5819°_{4\,1/2}-35346_{3\,1/2}$	−31
3376.137	15	*MB*	29611.146	$9198°_{3\,1/2}-38809_{3\,1/2}$	−3	3386.080	40	*MB*	29524.198	$7818°_{1\,1/2}-37342_{2\,1/2}$	18
3376.335	5	*MB*	29609.410			3386.400	15	*MB*	29521.408	$4523°_{4\,1/2}-34044_{4\,1/2}$	0
3376.465	20	*MB*	29608.270			3386.569	20	*MB*	29519.935		
3376.678	30	*MB*	29606.403	$10869_{4\,1/2}-40475°_{3\,1/2}$	19	3386.675	2	*MB*	29519.011		
				$4201°_{1\,1/2}-33808_{2\,1/2}$	−20	3386.837	25	*MB*	29517.599	$11340°_{3\,1/2}-40858_{4\,1/2}$	−7
3376.963	15	*WA*	29603.904	$11454_{6\,1/2}-41058°_{7\,1/2}$	−8	3386.873	20	*MB*	29517.286	$4459°_{3\,1/2}-33977_{3\,1/2}$	18
3377.119	440	*MB*	29602.536	$4910°_{5\,1/2}-34513_{6\,1/2}$	32	3387.029	2	*MB*	29515.926		
3377.300	30	*MB*	29600.950	$15529_{2\,1/2}-45130°_{2\,1/2}$	−2	3387.073	7	*MB*	29515.543		
3377.765	35	*MB*	29596.875	$10274°_{3\,1/2}-39871_{4\,1/2}$	13	3387.125	5	*MB*	29515.090		
3377.846	15	*MB*	29596.165	$7746°_{2\,1/2}-37342_{2\,1/2}$	24	3387.336	30	*MB*	29513.251	$5513_{5\,1/2}-35026°_{4\,1/2}$	16
3378.113	30	*MB*	29593.826	$5964°_{3\,1/2}-35558_{3\,1/2}$	21	3387.535	35	*MB*	29511.517		
3378.183	45	*MB*	29593.213	$3703°_{3\,1/2}-33296_{4\,1/2}$	2	3387.770	70	*MB*	29509.470	$5716°_{3\,1/2}-35225_{2\,1/2}$	31
3378.364	2	*MB*	29591.628			3387.964	10	*MB*	29507.781		
3378.481	2	*MB*	29590.603			3388.036	15	*MB*	29507.154		
3378.810	40	*MB*	29587.722	$6549°_{2\,1/2}-36137_{2\,1/2}$	26	3388.240	20	*MB*	29505.377		
3379.049	7	*MB*	29585.629			3388.394	30	*MB*	29504.036	$2634°_{2\,1/2}-32138_{2\,1/2}$	4
3379.167	130	*MB*	29584.596	$4459°_{3\,1/2}-34044_{4\,1/2}$	27	3388.476	30	*MB*	29503.322	$11007°_{1\,1/2}-40511_{1\,1/2}$	−5
3379.662	25	*MB*	29580.263			3388.544	15	*MB*	29502.730		
3379.763	35	*MB*	29579.379			3388.818	10	*MB*	29500.345		
3380.186	2	*MB*	29575.678	$13758°_{1\,1/2}-43334_{0\,1/2}$	14	3389.195	30	*MB*	29497.063	$5437°_{3\,1/2}-34934_{2\,1/2}$	63
3381.114	35	*MB*	29567.560	$8702°_{1\,1/2}-38269_{0\,1/2}$	31	3389.285	15	*MB*	29496.280		
				$8280°_{2\,1/2}-37848_{2\,1/2}$	−43	3389.413	30	*MB*	29495.166	$1873°_{3\,1/2}-31369_{2\,1/2}$	7
3381.244	2	*MB*	29566.424			3389.498	12	*MB*	29494.427	$19136°_{2\,1/2}-48630_{1\,1/2}$	−5
3381.484	90	*MB*	29564.325	$6638°_{4\,1/2}-36202_{4\,1/2}$	26	3389.826	45	*MB*	29491.573	$5437°_{3\,1/2}-34928_{4\,1/2}$	26
3381.582	20	*MB*	29563.468	$10274°_{3\,1/2}-39838_{2\,1/2}$	−5	3389.950	20	*MB*	29490.494		
3381.856	10	*MB*	29561.073	$13012°_{2\,1/2}-42573_{3\,1/2}$	−22	3390.061	5	*MB*	29489.529		
3381.918	20	*MB*	29560.531			3390.329	10	*MB*	29487.197		
3382.201	12	*MB*	29558.058			3390.505	90	*MB*	29485.667	$3593°_{4\,1/2}-33079_{3\,1/2}$	37
3382.307	45	*MB*	29557.132	$3995°_{3\,1/2}-33552_{2\,1/2}$	10	3390.616	15	*MB*	29484.702	$5283°_{0\,1/2}-34767_{1\,1/2}$	40
3382.387	10	*MB*	29556.432	$7522°_{0\,1/2}-37078_{1\,1/2}$	12	3390.774	10	*MB*	29483.328	$5437°_{3\,1/2}-34920_{3\,1/2}$	−37
				$2641°_{3\,1/2}-32197_{4\,1/2}$	10	3390.802	35	*MB*	29483.084	$7713°_{4\,1/2}-37196_{4\,1/2}$	35
3382.474	12	*MB*	29555.673			3390.977	20	*MB*	29481.563		
3382.504	40	*MB*	29555.410	$2382°_{4\,1/2}-31937_{3\,1/2}$	4	3391.403	15	*MB*	29477.860		
3382.600	5	*MB*	29554.572			3391.461	10	*MB*	29477.356		
3382.672	40	*MB*	29553.943	$15576_{1\,1/2}-45130°_{2\,1/2}$	−17	3391.586	35	*MB*	29476.269	$8175°_{2\,1/2}-37652_{2\,1/2}$	42
3382.701	30	*MB*	29553.689	$4322°_{2\,1/2}-33876_{1\,1/2}$	20	3391.870	20	*MB*	29473.801	$6638°_{4\,1/2}-36112_{3\,1/2}$	39
3383.190	7	*MB*	29549.418	$13784°_{1\,1/2}-43334_{0\,1/2}$	−79	3392.251	25	*MB*	29470.491	$11387°_{3\,1/2}-40858_{4\,1/2}$	17
3383.271	20	*MB*	29548.710	$2382°_{4\,1/2}-31930_{4\,1/2}$	21	3392.782	40	*WA*	29465.879	$4511°_{2\,1/2}-33977_{3\,1/2}$	−3
3383.388	50	*MB*	29547.688	$11742°_{5\,1/2}-41289_{5\,1/2}$	−37						
3383.472	15	*MB*	29546.955			3392.996	10	*MB*	29464.020	$7878°_{3\,1/2}-37342_{2\,1/2}$	22
3383.675	180	*MB*	29545.182	$4266°_{3\,1/2}-33811_{4\,1/2}$	12	3393.287	15	*MB*	29461.494		
3383.919	60	*MB*	29543.052	$2595°_{1\,1/2}-32138_{2\,1/2}$	−1	3393.333	12	*MB*	29461.094		
3384.055	35	*MB*	29541.865	$3508°_{0\,1/2}-33050_{1\,1/2}$	44	3393.713	2	*MB*	29457.796		
				$4266°_{3\,1/2}-33808_{2\,1/2}$	−54	3393.913	90	*MB*	29456.060	$4203°_{6\,1/2}-33659_{5\,1/2}$	26

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3394.134	60	*MB*	29454.142	$4523°_{4\,1/2}-33977_{3\,1/2}$	35	3403.722	25	*MB*	29371.175	$8280°_{2\,1/2}-37652_{2\,1/2}$	30
3394.332	10	*MB*	29452.424			3403.844	30	*MB*	29370.122	$4165_{4\,1/2}-33535°_{3\,1/2}$	36
3394.370	15	*MB*	29452.094			3404.122	35	*MB*	29367.723	$2563°_{5\,1/2}-31930_{4\,1/2}$	21
3394.794	15	*MB*	29448.416			3404.226	2	*MB*	29366.826		
3394.997	30	*MB*	29446.655	$13012°_{2\,1/2}-42458_{1\,1/2}$	7	3404.421	35	*MB*	29365.144	$4511°_{2\,1/2}-33876_{1\,1/2}$	24
3395.033	50	*MB*	29446.343	$9491°_{0\,1/2}-38937_{1\,1/2}$	20	3404.465	20	*MB*	29364.765	$0°_{3\,1/2}-29364_{3\,1/2}$	25
3395.187	5	*MB*	29445.007	$3703°_{3\,1/2}-33148_{2\,1/2}$	12	3404.904	180	*MB*	29360.979	$1873°_{3\,1/2}-31234_{2\,1/2}$	34
3396.038	15	*MB*	29437.629			3405.307	5	*MB*	29357.504		
3396.169	7	*MB*	29436.493			3405.444	20	*WA*	29356.323	$2581°_{4\,1/2}-31937_{3\,1/2}$	−72
3396.226	2	*MB*	29435.999			3405.623	20	*MB*	29354.780	$8175°_{2\,1/2}-37530_{1\,1/2}$	10
3396.714	35	*MB*	29431.770	$3745°_{1\,1/2}-33177_{0\,1/2}$	50	3405.803	40	*MB*	29353.229	$3363°_{2\,1/2}-32716_{2\,1/2}$	9
3396.940	10	*MB*	29429.812			3405.970	220	*MB*	29351.790	$4459°_{3\,1/2}-33811_{4\,1/2}$	95
3397.071	40	*MB*	29428.678	$4737°_{2\,1/2}-34166_{1\,1/2}$	12					$3508°_{0\,1/2}-32860_{0\,1/2}$	−92
3397.149	5	*MB*	29428.002			3406.093	40	*MB*	29350.730	$4201°_{1\,1/2}-33552_{2\,1/2}$	41
3397.204	20	*MB*	29427.525			3406.213	50	*MB*	29349.696	$2581°_{4\,1/2}-31930_{4\,1/2}$	17
3397.457	20	*MB*	29425.334			3406.356	45	*MB*	29348.464	$4459°_{3\,1/2}-33808_{2\,1/2}$	19
3397.599	2	*MB*	29424.104			3406.426	20	*MB*	29347.861	$5513_{5\,1/2}-34861°_{5\,1/2}$	44
3397.622	7	*MB*	29423.905			3406.605	2	*MB*	29346.319		
3397.767	7	*MB*	29422.650			3406.933	10	*MB*	29343.493	$9198°_{3\,1/2}-38541_{4\,1/2}$	−53
3397.802	2	*MB*	29422.347			3407.239	40	*MB*	29340.858	$18704_{5\,1/2}-48045°_{6\,1/2}$	71
3398.120	5	*MB*	29419.593			3407.397	20	*MB*	29339.498		
3398.209	20	*MB*	29418.823	$1410°_{4\,1/2}-30829_{3\,1/2}$	3	3407.580	50	*MB*	29337.922		
3398.311	25	*MB*	29417.940	$4737°_{2\,1/2}-34155_{3\,1/2}$	2	3408.036	15	*MB*	29333.997	$1873°_{3\,1/2}-31207_{3\,1/2}$	4
3398.570	12	*MB*	29415.698	$15235_{1\,1/2}-44651°_{1\,1/2}$	−25	3408.188	2	*WA*	29332.689	$7746°_{2\,1/2}-37078_{1\,1/2}$	−4
3398.627	20	*MB*	29415.205	$5010°_{2\,1/2}-34426_{2\,1/2}$	38	3408.415	10	*MB*	29330.735	$9198°_{3\,1/2}-38529_{2\,1/2}$	40
3398.715	45	*MB*	29414.443	$3995°_{3\,1/2}-33409_{3\,1/2}$	6	3408.615	10	*MB*	29329.014		
3398.926	25	*MB*	29412.617	$8175°_{2\,1/2}-37588_{3\,1/2}$	7	3408.796	50	*WA*	29327.457	$4203°_{6\,1/2}-33531_{6\,1/2}$	3
3399.149	2	*MB*	29410.687			3408.949	25	*MB*	29326.141	$6389°_{4\,1/2}-35716_{5\,1/2}$	0
3399.328	10	*MB*	29409.139	$13758°_{1\,1/2}-43167_{1\,1/2}$	−70	3409.399	30	*MB*	29322.270	$5010°_{2\,1/2}-34333_{2\,1/2}$	42
3399.471	20	*MB*	29407.902			3409.500	25	*MB*	29321.402	$4844°_{1\,1/2}-34166_{1\,1/2}$	7
3399.781	5	*MB*	29405.220			3409.780	5	*MB*	29318.994		
3399.983	12	*MB*	29403.473	$5942°_{3\,1/2}-35346_{3\,1/2}$	−10	3409.862	15	*MB*	29318.289	$2879°_{5\,1/2}-32197_{4\,1/2}$	2
3400.082	2	*MB*	29402.617			3410.215	50	*MB*	29315.254	$4844°_{1\,1/2}-34159_{0\,1/2}$	21
3400.246	40	*MB*	29401.199	$7522°_{5\,1/2}-36923_{4\,1/2}$	32	3410.328	15	*WA*	29314.283	$7202°_{2\,1/2}-36516_{1\,1/2}$	14
3400.340	20	*MB*	29400.387			3411.007	15	*MB*	29308.447	$15822_{3\,1/2}-45130°_{2\,1/2}$	−22
3400.736	5	*MB*	29396.963			3411.112	15	*MB*	29307.546	$8280°_{2\,1/2}-37588_{3\,1/2}$	19
3400.961	5	*MB*	29395.018			3411.427	30	*MB*	29304.839	$3745°_{1\,1/2}-33050_{1\,1/2}$	24
3401.139	2	*MB*	29393.480	$10646_{5\,1/2}-40039°_{6\,1/2}$	26	3411.567	30	*MB*	29303.637	$9634°_{1\,1/2}-38937_{1\,1/2}$	7
3401.442	2	*MB*	29390.862			3411.623	15	*MB*	29303.156		
3401.995	20	*MB*	29386.084			3411.834	40	*WA*	29301.344	$3995°_{3\,1/2}-33296_{4\,1/2}$	0
3402.179	30	*MB*	29384.495	$4910°_{5\,1/2}-34295_{4\,1/2}$	8	3412.032	25	*MB*	29299.643	$3745°_{1\,1/2}-33045_{2\,1/2}$	24
3402.253	10	*MB*	29383.856			3412.097	15	*MB*	29299.085		
3402.273	7	*MB*	29383.683			3412.226	30	*MB*	29297.978	$8896_{5\,1/2}-38194°_{4\,1/2}$	−20
3402.405	7	*MB*	29382.543			3412.331	40	*MB*	29297.076	$4511°_{2\,1/2}-33808_{2\,1/2}$	16
3402.542	4	*WA*	29381.360	$5964°_{3\,1/2}-35346_{3\,1/2}$	−25	3412.444	2	*MB*	29296.106	$2641°_{3\,1/2}-31937_{3\,1/2}$	12
3402.723	12	*MB*	29379.797			3412.738	30	*MB*	29293.582		
3402.929	12	*MB*	29378.019			3412.855	12	*MB*	29292.578		
3403.177	25	*MB*	29375.878	$3703°_{3\,1/2}-33079_{3\,1/2}$	−39	3412.888	5	*MB*	29292.295	$1410°_{4\,1/2}-30702_{4\,1/2}$	−10
3403.436	12	*MB*	29373.643			3413.231	20	*WA*	29289.351	$2641°_{3\,1/2}-31930_{4\,1/2}$	−25
3403.593	70	*MB*	29372.288	$4201°_{1\,1/2}-33574_{1\,1/2}$	36	3413.325	40	*MB*	29288.545	$4523°_{4\,1/2}-33811_{4\,1/2}$	11

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3413.454	15	*PK*	29287.438	$6638°_{4\,1/2}-35925_{3\,1/2}$	14	3422.869	12	*MB*	29206.882	$8927°_{5\,1/2}-38134_{4\,1/2}$	−3
3413.602	20	*MB*	29286.168	$4266°_{3\,1/2}-33552_{2\,1/2}$	−16	3423.244	10	*MB*	29203.682		
3413.649	25	*MB*	29285.765	$19982_{4\,1/2}-49267°_{4\,1/2}$	−29	3423.416	10	*MB*	29202.215	$13527_{4\,1/2}-42729°_{5\,1/2}$	7
3414.160	35	*MB*	29281.382	$0°_{3\,1/2}-29281_{2\,1/2}$	8	3423.483	20	*MB*	29201.644	$1873°_{3\,1/2}-31075_{4\,1/2}$	−24
3414.307	40	*MB*	29280.121	$10114°_{2\,1/2}-39394_{3\,1/2}$	11	3423.624	25	*MB*	29200.441		
3414.484	20	*MB*	29278.603			3423.846	100	*WA*	29198.548	$9634°_{1\,1/2}-38832_{2\,1/2}$	25
3414.602	25	*MB*	29277.592	$5651°_{5\,1/2}-34928_{4\,1/2}$	−19	3423.912	30	*MB*	29197.985		
3414.638	20	*MB*	29277.283			3424.020	40	*WA*	29197.064	$10641°_{2\,1/2}-39838_{2\,1/2}$	61
3414.699	10	*MB*	29276.760	$13256_{1\,1/2}-42533°_{1\,1/2}$	2	3424.289	20	*MB*	29194.771		
3414.780	20	*MB*	29276.066			3425.342	70	*MB*	29185.796	$8402°_{3\,1/2}-37588_{3\,1/2}$	−8
3414.946	1	*WA*	29274.642	$3363°_{2\,1/2}-32638_{1\,1/2}$	−95					$2382°_{4\,1/2}-31568_{4\,1/2}$	23
3415.064	35	*MB*	29273.631	$5924°_{1\,1/2}-35197_{1\,1/2}$	−4	3425.398	35	*MB*	29185.319	$11325°_{2\,1/2}-40511_{1\,1/2}$	−26
3415.616	40	*MB*	29268.900	$3593°_{4\,1/2}-32862_{3\,1/2}$	16	3425.501	5	*MB*	29184.441		
3415.943	12	*MB*	29266.098			3425.679	20	*WA*	29182.925	$9269°_{0\,1/2}-38452_{1\,1/2}$	1
3416.169	10	*MB*	29264.162			3425.937	60	*WA*	29180.727	$7713°_{4\,1/2}-36893_{3\,1/2}$	47
3416.344	2	*MB*	29262.663			3426.203	360	*MB*	29178.462	$987°_{4\,1/2}-30166_{3\,1/2}$	16
3416.450	35	*MB*	29261.756			3426.446	20	*WA*	29176.393	$2382°_{4\,1/2}-31558_{3\,1/2}$	13
3416.565	80	*MB*	29260.771	$5964°_{3\,1/2}-35225_{2\,1/2}$	11	3426.580	70	*MB*	29175.252	$2563°_{5\,1/2}-31738_{5\,1/2}$	1
3416.855	130	*MB*	29258.287	$9634°_{1\,1/2}-38892_{0\,1/2}$	−27	3426.890	10	*MB*	29172.612	$8169°_{1\,1/2}-37342_{2\,1/2}$	−16
				$987°_{4\,1/2}-30245_{4\,1/2}$	20	3426.922	7	*MB*	29172.340		
3416.946	15	*MB*	29257.508			3427.089	35	*MB*	29170.919	$10684°_{0\,1/2}-39855_{0\,1/2}$	−38
3417.145	7	*WA*	29255.804	$2595°_{1\,1/2}-31851_{2\,1/2}$	51	3427.136	30	*WA*	29170.519	$2595°_{1\,1/2}-31766_{1\,1/2}$	54
3417.446	260	*MB*	29253.228	$5675°_{4\,1/2}-34928_{4\,1/2}$	22	3427.293	30	*MB*	29169.182	$1873°_{3\,1/2}-31043_{2\,1/2}$	7
3417.655	20	*MB*	29251.439	$4322°_{2\,1/2}-33574_{1\,1/2}$	2	3427.426	12	*MB*	29168.051		
3417.863	25	*MB*	29249.659	$8280°_{2\,1/2}-37530_{1\,1/2}$	−27	3427.608	30	*MB*	29166.502	$8175°_{2\,1/2}-37342_{2\,1/2}$	38
3417.891	70	*MB*	29249.419	$8402°_{3\,1/2}-37652_{2\,1/2}$	−3	3428.064	20	*MB*	29162.622	$17000_{3\,1/2}-46162°_{4\,1/2}$	−62
3417.927	25	*MB*	29249.111	$11949°_{3\,1/2}-41198_{2\,1/2}$	−8	3428.189	7	*MB*	29161.559		
3418.155	2	*MB*	29247.160			3428.474	15	*MB*	29159.135	$3703°_{3\,1/2}-32862_{3\,1/2}$	−37
3418.276	2	*MB*	29246.125			3428.513	30	*MB*	29158.803	$9778°_{2\,1/2}-38937_{1\,1/2}$	−26
3418.406	5	*MB*	29245.013	$5675°_{4\,1/2}-34920_{3\,1/2}$	−11	3428.697	30	*WA*	29157.238	$2581°_{4\,1/2}-31738_{5\,1/2}$	12
3418.687	5	*MB*	29242.609			3428.956	20	*MB*	29155.036		
3418.838	20	*MB*	29241.317			3429.150	20	*MB*	29153.387		
3418.921	90	*MB*	29240.607	$12751°_{5\,1/2}-41992_{6\,1/2}$	34	3429.180	20	*MB*	29153.132	$3995°_{3\,1/2}-33148_{2\,1/2}$	3
3419.246	30	*MB*	29237.828	$7278°_{1\,1/2}-36516_{1\,1/2}$	−47	3429.492	15	*MB*	29150.480		
3419.526	2	*MB*	29235.434			3429.632	30	*MB*	29149.290		
3419.660	15	*MB*	29234.289			3429.831	25	*MB*	29147.598	$7746°_{2\,1/2}-36893_{3\,1/2}$	14
3419.817	20	*MB*	29232.947			3429.866	30	*MB*	29147.301	$987°_{4\,1/2}-30134_{5\,1/2}$	2
3420.175	130	*MB*	29229.887	$4322°_{2\,1/2}-33552_{2\,1/2}$	13	3429.950	10	*MB*	29146.587		
3420.407	10	*MB*	29227.904			3430.004	2	*MB*	29146.128	$8702°_{1\,1/2}-37848_{2\,1/2}$	23
3420.533	35	*MB*	29226.828	$7061°_{0\,1/2}-36288_{0\,1/2}$	7	3430.252	40	*WA*	29144.021	$3363°_{2\,1/2}-32507_{1\,1/2}$	6
3420.709	2	*MB*	29225.324			3430.312	120	*MB*	29143.511	$7059°_{4\,1/2}-36202_{4\,1/2}$	27
3420.863	7	*MB*	29224.008							$4266°_{3\,1/2}-33409_{3\,1/2}$	12
3421.540	30	*MB*	29218.226	$5716°_{3\,1/2}-34934_{2\,1/2}$	19	3430.588	20	*MB*	29141.167	$12057°_{2\,1/2}-41198_{2\,1/2}$	−34
3421.714	20	*WA*	29216.740	$2634°_{2\,1/2}-31851_{2\,1/2}$	10	3430.665	30	*MB*	29140.513	$15510_{0\,1/2}-44651°_{1\,1/2}$	−3
3421.879	15	*MB*	29215.332			3430.841	40	*MB*	29139.018	$4737°_{2\,1/2}-33876_{1\,1/2}$	14
3422.000	25	*MB*	29214.299	$5118°_{2\,1/2}-34333_{2\,1/2}$	7	3430.898	7	*MB*	29138.534		
3422.421	40	*MB*	29210.705	$7713°_{4\,1/2}-36923_{4\,1/2}$	5	3431.016	125	*MB*	29137.532	$19950_{6\,1/2}-49087°_{7\,1/2}$	−7
3422.485	40	*MB*	29210.159	$8927°_{5\,1/2}-38137_{5\,1/2}$	−8	3431.085	20	*MB*	29136.946	$4523°_{4\,1/2}-33659_{5\,1/2}$	11
3422.522	40	*MB*	29209.843	$2641°_{3\,1/2}-31851_{2\,1/2}$	5	3431.194	40	*MB*	29136.020	$11949°_{3\,1/2}-41085_{3\,1/2}$	−4
3422.708	550	*MT*	29208.256	$3593°_{4\,1/2}-32802_{5\,1/2}$	−26	3431.252	20	*MB*	29135.528	$17851°_{0\,1/2}-46987_{1\,1/2}$	−39

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3431.371	10	*MB*	29134.517			3441.398	30	*MB*	29049.632	$3995°_{3\frac{1}{2}}-33045_{2\frac{1}{2}}$	−2
3431.427	25	*MB*	29134.042	$11949°_{3\frac{1}{2}}-41083_{4\frac{1}{2}}$	−62	3441.622	7	*MB*	29047.742		
3431.494	60	*PK*	29133.473	$4910°_{5\frac{1}{2}}-34044_{4\frac{1}{2}}$	−4	3441.682	2	*MB*	29047.235	$5118°_{2\frac{1}{2}}-34166_{1\frac{1}{2}}$	3
3431.734	30	*MB*	29131.436	$2634°_{2\frac{1}{2}}-31766_{1\frac{1}{2}}$	−6	3441.894	10	*WA*	29045.446	$7878°_{3\frac{1}{2}}-36923_{4\frac{1}{2}}$	−14
3432.480	7	*MB*	29125.105			3441.956	7	*MB*	29044.923		
3432.650	5	*MB*	29123.662			3442.022	7	*MB*	29044.366		
3432.767	25	*MB*	29122.670	$12466°_{1\frac{1}{2}}-41589_{0\frac{1}{2}}$	−34	3442.081	15	*MB*	29043.868	$15593_{6\frac{1}{2}}-44637°_{6\frac{1}{2}}$	−19
3433.079	160	*MB*	29120.023	$10274°_{3\frac{1}{2}}-39394_{3\frac{1}{2}}$	1	3442.183	30	*MB*	29043.008	$8927°_{5\frac{1}{2}}-37970_{5\frac{1}{2}}$	−9
3433.305	5	*MB*	29118.106			3442.381	130	*MB*	29041.337	$4511°_{2\frac{1}{2}}-33552_{2\frac{1}{2}}$	13
3433.498	15	*MB*	29116.470			3442.555	10	*MB*	29039.869	$10798°_{2\frac{1}{2}}-39838_{2\frac{1}{2}}$	−20
3433.566	25	*MB*	29115.893	$11742°_{5\frac{1}{2}}-40858_{4\frac{1}{2}}$	−66	3442.954	60	*MB*	29036.504	$5118°_{2\frac{1}{2}}-34155_{3\frac{1}{2}}$	0
3433.684	35	*MB*	29114.892	$3745°_{1\frac{1}{2}}-32860_{0\frac{1}{2}}$	15	3443.088	5	*MB*	29035.374		
3433.899	30	*MB*	29113.069			3443.522	35	*MB*	29031.715	$4844°_{1\frac{1}{2}}-33876_{1\frac{1}{2}}$	−17
3434.175	10	*MB*	29110.730			3443.678	25	*MB*	29030.400	$4266°_{3\frac{1}{2}}-33296_{4\frac{1}{2}}$	−7
3434.198	12	*MB*	29110.535			3443.950	2	*MB*	29028.107	$12057°_{2\frac{1}{2}}-41085_{3\frac{1}{2}}$	0
3434.280	20	*MB*	29109.840	$5819°_{4\frac{1}{2}}-34928_{4\frac{1}{2}}$	−15	3444.088	5	*MB*	29026.944		
3434.793	10	*MB*	29105.492			3444.180	25	*MB*	29026.169	$7818°_{1\frac{1}{2}}-36844_{2\frac{1}{2}}$	11
3435.203	25	*MB*	29102.019	$8702°_{1\frac{1}{2}}-37804_{1\frac{1}{2}}$	29	3444.342	10	*MB*	29024.803		
3435.241	20	*MB*	29101.697	$5819°_{4\frac{1}{2}}-34920_{3\frac{1}{2}}$	22	3444.581	10	*MB*	29022.790		
3435.416	20	*MB*	29100.214			3444.736	12	*MB*	29021.484	$13012°_{2\frac{1}{2}}-42033_{2\frac{1}{2}}$	−73
3435.660	25	*MB*	29098.148	$7746°_{2\frac{1}{2}}-36844_{2\frac{1}{2}}$	28	3444.787	30	*MB*	29021.054	$10058_{6\frac{1}{2}}-39079°_{5\frac{1}{2}}$	−17
3435.803	15	*MB*	29096.937	$5716°_{3\frac{1}{2}}-34813_{2\frac{1}{2}}$	−48	3445.104	20	*MB*	29018.384	$14315°_{0\frac{1}{2}}-43334_{0\frac{1}{2}}$	−17
3435.840	10	*MB*	29096.623	$13436_{2\frac{1}{2}}-42533°_{1\frac{1}{2}}$	19	3445.305	12	*MB*	29016.691	$17571_{4\frac{1}{2}}-46588°_{5\frac{1}{2}}$	−38
3436.304	30	*MB*	29092.694	$4459°_{3\frac{1}{2}}-33552_{2\frac{1}{2}}$	−15	3445.555	2	*MB*	29014.586		
3436.558	5	*MB*	29090.544	$15803_{4\frac{1}{2}}-44893°_{3\frac{1}{2}}$	−84	3445.673	5	*MB*	29013.592		
3436.727	3	*WA*	29089.114			3445.879	7	*MB*	29011.858		
3436.906	20	*MB*	29087.599			3446.075	15	*MB*	29010.208	$5924°_{1\frac{1}{2}}-34934_{2\frac{1}{2}}$	−10
3436.956	25	*MB*	29087.176	$4322°_{2\frac{1}{2}}-33409_{3\frac{1}{2}}$	−12	3446.230	25	*MB*	29008.903		
3437.080	20	*MB*	29086.126	$9723°_{4\frac{1}{2}}-38809_{3\frac{1}{2}}$	−14	3446.679	7	*MB*	29005.124		
3437.324	40	*WA*	29084.062	$3995°_{3\frac{1}{2}}-33079_{3\frac{1}{2}}$	10	3446.720	80	*MB*	29004.779	$2563°_{5\frac{1}{2}}-31568_{4\frac{1}{2}}$	−6
3437.537	15	*MB*	29082.260			3446.851	25	*MB*	29003.677	$12097_{3\frac{1}{2}}-41100°_{2\frac{1}{2}}$	21
3437.804	40	*MB*	29080.001			3447.269	35	*MB*	29000.160	$9269°_{0\frac{1}{2}}-38269_{0\frac{1}{2}}$	12
3437.915	10	*MB*	29079.062			3447.615	12	*MB*	28997.249	$16133_{2\frac{1}{2}}-45130°_{2\frac{1}{2}}$	−85
3438.063	45	*MB*	29077.810	$6638°_{4\frac{1}{2}}-35716_{5\frac{1}{2}}$	−14	3447.964	15	*MB*	28994.314	$7522°_{0\frac{1}{2}}-36516_{1\frac{1}{2}}$	−25
3438.185	7	*MB*	29076.779			3448.192	2	*MB*	28992.397		
3438.294	20	*MB*	29075.857			3448.280	35	*MB*	28991.658	$5942°_{3\frac{1}{2}}-34934_{2\frac{1}{2}}$	33
3438.330	10	*MB*	29075.552			3448.447	15	*MB*	28990.254		
3438.429	15	*MB*	29074.715	$15576_{1\frac{1}{2}}-44651°_{1\frac{1}{2}}$	−19	3448.529	2	*MB*	28989.564		
3438.877	25	*MB*	29070.928	$4737°_{2\frac{1}{2}}-33808_{2\frac{1}{2}}$	−15	3448.644	25	*MB*	28988.598	$5437°_{3\frac{1}{2}}-34426_{2\frac{1}{2}}$	−16
3438.986	2	*MB*	29070.006			3448.862	15	*MB*	28986.765	$2581°_{4\frac{1}{2}}-31568_{4\frac{1}{2}}$	4
3439.121	2	*MB*	29068.865	$19481_{4\frac{1}{2}}-48549°_{4\frac{1}{2}}$	−84	3448.925	10	*MB*	28986.236	$5942°_{3\frac{1}{2}}-34928_{4\frac{1}{2}}$	65
3439.634	10	*MB*	29064.530			3449.002	2	*MB*	28985.589		
3439.829	130	*MB*	29062.882	$4511°_{2\frac{1}{2}}-33574_{1\frac{1}{2}}$	−5	3449.843	7	*MB*	28978.523	$14481°_{2\frac{1}{2}}-43460_{2\frac{1}{2}}$	−79
3439.971	10	*MB*	29061.683			3449.905	30	*MB*	28978.002	$5942°_{3\frac{1}{2}}-34920_{3\frac{1}{2}}$	12
3439.997	7	*MB*	29061.463	$8280°_{2\frac{1}{2}}-37342_{2\frac{1}{2}}$	82	3449.978	30	*MB*	28977.389	$2581°_{4\frac{1}{2}}-31558_{3\frac{1}{2}}$	20
3440.455	35	*MB*	29057.594	$5455°_{7\frac{1}{2}}-34513_{6\frac{1}{2}}$	−28	3450.042	2	*MB*	28976.851		
3440.489	35	*MB*	29057.307	$13515°_{3\frac{1}{2}}-42573_{3\frac{1}{2}}$	−30	3450.226	35	*MB*	28975.306	$4201°_{1\frac{1}{2}}-33177_{0\frac{1}{2}}$	3
3440.576	30	*MB*	29056.573	$8175°_{2\frac{1}{2}}-37232_{1\frac{1}{2}}$	−1	3450.250	25	*MB*	28975.105		
3441.008	12	*MB*	29052.925	$7059°_{4\frac{1}{2}}-36112_{3\frac{1}{2}}$	−23	3450.330	20	*MB*	28974.433		
3441.205	260	*MB*	29051.262	$2879°_{5\frac{1}{2}}-31930_{4\frac{1}{2}}$	21	3450.715	25	*MB*	28971.200	$3745°_{1\frac{1}{2}}-32716_{2\frac{1}{2}}$	29

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3450.911	25	*MB*	28969.555	$5964°_{3\,1/2}-34934_{2\,1/2}$	28	3461.134	15	*MB*	28883.991		
3451.305	10	*MB*	28966.248	$5010°_{2\,1/2}-33977_{3\,1/2}$	−21	3461.344	90	*WA*	28882.239	$4266°_{3\,1/2}-33148_{2\,1/2}$	47
3451.336	20	*MB*	28965.988	$7878°_{3\,1/2}-36844_{2\,1/2}$	11	3461.479	5	*MB*	28881.113		
3451.563	70	*MB*	28964.083	$5964°_{3\,1/2}-34928_{4\,1/2}$	10	3461.788	40	*WA*	28878.535	$7259°_{3\,1/2}-36137_{2\,1/2}$	6
3451.623	40	*MB*	28963.579	$12326°_{6\,1/2}-41289_{5\,1/2}$	25	3462.233	25	*MB*	28874.823	$4165_{4\,1/2}-33040°_{4\,1/2}$	20
3451.903	20	*WA*	28961.230	$9491°_{0\,1/2}-38452_{1\,1/2}$	−26	3462.763	20	*WA*	28870.404	$5942°_{3\,1/2}-34813_{2\,1/2}$	0
3452.055	15	*MB*	28959.955	$5969°_{5\,1/2}-34928_{4\,1/2}$	−6	3462.808	15	*MB*	28870.028		
3452.511	10	*MB*	28956.130			3463.133	40	*MB*	28867.319	$3995°_{3\,1/2}-32862_{3\,1/2}$	13
3452.537	35	*MB*	28955.912	$5964°_{3\,1/2}-34920_{3\,1/2}$	20	3463.214	90	*MB*	28866.644	$7059°_{4\,1/2}-35925_{3\,1/2}$	34
3452.619	30	*MB*	28955.224	$1873°_{3\,1/2}-30829_{3\,1/2}$	34	3463.347	30	*MB*	28865.536	$5010°_{2\,1/2}-33876_{1\,1/2}$	29
3452.674	15	*MB*	28954.763	$3363°_{2\,1/2}-32318_{3\,1/2}$	15	3463.604	20	*MB*	28863.394		
3452.922	10	*MB*	28952.683			3463.756	90	*MB*	28862.127	$5651°_{5\,1/2}-34513_{6\,1/2}$	17
3453.060	15	*WA*	28951.526	$8280°_{2\,1/2}-37232_{1\,1/2}$	35	3464.154	90	*MB*	28858.811	$2879°_{5\,1/2}-31738_{5\,1/2}$	23
3453.240	30	*MB*	28950.017	$4459°_{3\,1/2}-33409_{3\,1/2}$	−7	3464.208	70	*MB*	28858.362	$5118°_{2\,1/2}-33977_{3\,1/2}$	28
3453.281	25	*MB*	28949.674	$8702°_{1\,1/2}-37652_{2\,1/2}$	27	3464.247	7	*MB*	28858.037	$5437°_{3\,1/2}-34295_{4\,1/2}$	9
3453.637	15	*MB*	28946.689	$4201°_{1\,1/2}-33148_{2\,1/2}$	−6	3464.298	25	*MB*	28857.612		
3453.763	20	*MB*	28945.634	$4165_{4\,1/2}-33111°_{3\,1/2}$	21	3464.856	45	*MB*	28852.965	$7259°_{3\,1/2}-36112_{3\,1/2}$	19
3453.865	15	*MB*	28944.779			3464.985	45	*MB*	28851.890	$14315°_{0\,1/2}-43167_{1\,1/2}$	−57
3454.017	20	*MB*	28943.505	$7259°_{3\,1/2}-36202_{4\,1/2}$	23	3465.277	35	*MB*	28849.459		
3454.251	40	*MB*	28941.544			3465.309	30	*MB*	28849.193	$10088°_{1\,1/2}-38937_{1\,1/2}$	17
3454.323	15	*MB*	28940.941			3465.413	35	*MB*	28848.327	$5964°_{3\,1/2}-34813_{2\,1/2}$	21
3454.471	50	*WA*	28939.701	$6517°_{2\,1/2}-35457_{1\,1/2}$	2	3465.503	35	*MB*	28847.578	$19483_{2\,1/2}-48330°_{3\,1/2}$	13
3454.517	15	*MB*	28939.316							$11007°_{1\,1/2}-39855_{0\,1/2}$	−21
3454.663	12	*MB*	28938.093			3465.574	12	*MB*	28846.987	$15576_{1\,1/2}-44423°_{1\,1/2}$	−19
3454.911	20	*WA*	28936.016	$6521°_{1\,1/2}-35457_{1\,1/2}$	30	3465.697	12	*MB*	28845.963		
3455.023	25	*MB*	28935.078	$7202°_{2\,1/2}-36137_{2\,1/2}$	3	3465.930	5	*MB*	28844.024		
3455.132	10	*MB*	28934.165			3466.006	7	*MB*	28843.392	$5924°_{1\,1/2}-34767_{1\,1/2}$	−91
3455.471	25	*MB*	28931.326	$11742°_{5\,1/2}-40673_{5\,1/2}$	−3	3466.032	30	*MB*	28843.175	$4201°_{1\,1/2}-33045_{2\,1/2}$	−26
3456.332	50	*MB*	28924.120	$12365°_{4\,1/2}-41289_{5\,1/2}$	−44	3466.794	40	*MB*	28836.836	$4737°_{2\,1/2}-33574_{1\,1/2}$	64
3456.668	40	*MB*	28921.308	$987°_{4\,1/2}-29908_{4\,1/2}$	15	3466.945	50	*MB*	28835.580	$1410°_{4\,1/2}-30245_{4\,1/2}$	6
3456.766	90	*MB*	28920.488	$6638°_{4\,1/2}-35558_{3\,1/2}$	44	3467.776	40	*MT*	28828.670	$6517°_{2\,1/2}-35346_{3\,1/2}$	7
3456.936	5	*MB*	28919.066							$1873°_{3\,1/2}-30702_{4\,1/2}$	−5
3457.175	40	*MB*	28917.067	$2641°_{3\,1/2}-31558_{3\,1/2}$	0	3467.925	10	*MB*	28827.431		
3457.356	7	*MB*	28915.553			3468.108	90	*MB*	28825.910	$4322°_{2\,1/2}-33148_{2\,1/2}$	30
3457.417	7	*MB*	28915.043			3468.352	10	*MB*	28823.882		
3457.558	30	*MB*	28913.864	$13659°_{4\,1/2}-42573_{3\,1/2}$	2	3468.374	40	*MB*	28823.700	$4165_{4\,1/2}-32989°_{3\,1/2}$	32
3457.620	5	*MB*	28913.345	$8702°_{1\,1/2}-37615_{0\,1/2}$	56	3468.467	20	*MB*	28822.927	$10114°_{2\,1/2}-38937_{1\,1/2}$	−5
3457.990	12	*MB*	28910.252			3468.696	35	*MB*	28821.024	$2140°_{0\,1/2}-30961_{1\,1/2}$	−1
3458.208	45	*MB*	28908.429			3468.785	7	*MB*	28820.285		
3458.853	35	*MB*	28903.039	$8175°_{2\,1/2}-37078_{1\,1/2}$	23	3468.883	50	*MB*	28819.471	$987°_{4\,1/2}-29807_{3\,1/2}$	4
										$3593°_{4\,1/2}-32413_{3\,1/2}$	7
3459.385	2	*WA*	28898.594	$4511°_{2\,1/2}-33409_{3\,1/2}$	−45						
3459.437	20	*WA*	28898.160	$3593°_{4\,1/2}-32492_{5\,1/2}$	4	3468.995	20b	*MB*	28818.540	$9723°_{4\,1/2}-38541_{4\,1/2}$	2
3459.736	5	*WA*	28895.662	$5437°_{3\,1/2}-34333_{2\,1/2}$	−13					$9634°_{1\,1/2}-38452_{1\,1/2}$	−23
3459.833	70	*WA*	28894.852	$9634°_{1\,1/2}-38529_{2\,1/2}$	17	3469.199	2	*MB*	28816.845		
3460.097	20	*MB*	28892.648	$3745°_{1\,1/2}-32638_{1\,1/2}$	−41	3469.394	40	*MB*	28815.226	$4737°_{2\,1/2}-33552_{2\,1/2}$	17
3460.160	40	*MB*	28892.122	$2140°_{0\,1/2}-31032_{0\,1/2}$	3	3469.875	10	*MB*	28811.232		
3460.199	15	*MB*	28891.796			3470.213	7	*MB*	28808.425		
3460.377	2	*MB*	28890.310			3470.396	40	*MB*	28806.906	$987°_{4\,1/2}-29794_{3\,1/2}$	1
3460.581	20	*MB*	28888.607	$19136°_{2\,1/2}-48024_{2\,1/2}$	−43	3470.504	7	*WA*	28806.010	$3508°_{0\,1/2}-32314_{0\,1/2}$	11
3460.790	15	*MB*	28886.862	$4523°_{4\,1/2}-33409_{3\,1/2}$	−1	3470.614	25	*MB*	28805.097		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3470.748	7	*MB*	28803.985			3480.340	30	*MB*	28724.602	$1410°_{4\,1/2}-30134_{5\,1/2}$	−3
3470.995	20	*MB*	28801.935			3480.376	40	*WA*	28724.305	$3593°_{4\,1/2}-32318_{3\,1/2}$	12
3471.129	10	*MB*	28800.823			3480.437	7	*MB*	28723.801	$5283°_{0\,1/2}-34006_{0\,1/2}$	9
3471.160	15	*MB*	28800.566			3480.521	7	*MB*	28723.108	$7202°_{2\,1/2}-35925_{3\,1/2}$	−44
3471.272	35	*MB*	28799.637			3480.612	25	*MB*	28722.357	$4322°_{2\,1/2}-33045_{2\,1/2}$	−29
3471.479	10	*MB*	28797.920	$8280°_{2\,1/2}-37078_{1\,1/2}$	−12	3480.759	20	*MB*	28721.144	$3995°_{3\,1/2}-32716_{2\,1/2}$	−42
3471.537	20	*MB*	28797.438	$5010°_{2\,1/2}-33808_{2\,1/2}$	−8	3480.972	70	*MB*	28719.387	$12365°_{4\,1/2}-41085_{3\,1/2}$	−20
3471.642	25	*MB*	28796.568	$16152_{3\,1/2}-44949°_{4\,1/2}$	−65	3481.152	70	*MB*	28717.902	$8175°_{2\,1/2}-36893_{3\,1/2}$	−4
3471.814	5	*MB*	28795.141							$5437°_{3\,1/2}-34155_{3\,1/2}$	13
3471.924	10	*MB*	28794.229			3481.202	15	*MB*	28717.489	$12365°_{4\,1/2}-41083_{4\,1/2}$	2
3472.017	40	*MB*	28793.458	$8402°_{3\,1/2}-37196_{4\,1/2}$	−12	3481.504	12	*MB*	28714.998		
3472.142	12	*MB*	28792.421			3481.748	12	*MB*	28712.986		
3472.278	2	*MB*	28791.293			3482.133	130	*MB*	28709.812	$5716°_{3\,1/2}-34426_{2\,1/2}$	−8
3472.762	10	*MB*	28787.281			3482.199	25	*MB*	28709.267		
3473.027	25	*MB*	28785.084			3482.348	220	*MB*	28708.039	$6638°_{4\,1/2}-35346_{3\,1/2}$	15
										$6517°_{2\,1/2}-35225_{2\,1/2}$	2
3473.128	35	*MB*	28784.247	$8804°_{4\,1/2}-37588_{3\,1/2}$	−1						
3473.708	50	*MB*	28779.441			3482.413	40	*MB*	28707.503	$2382°_{4\,1/2}-31089_{5\,1/2}$	18
3473.799	40	*MB*	28778.687	$4266°_{3\,1/2}-33045_{2\,1/2}$	−10	3482.799	30	*MB*	28704.322	$6521°_{1\,1/2}-35225_{2\,1/2}$	−1
3473.927	20	*MB*	28777.627			3482.928	2	*MB*	28703.259		
3474.210	70	*MB*	28775.283	$3363°_{2\,1/2}-32138_{2\,1/2}$	12	3482.976	12	*MB*	28702.863		
3474.394	20	*MB*	28773.759	$4523°_{4\,1/2}-33296_{4\,1/2}$	−12	3483.077	2	*MB*	28702.031		
3474.433	2	*MB*	28773.436	$2595°_{1\,1/2}-31369_{2\,1/2}$	−12	3483.317	15	*MB*	28700.053	$13758°_{1\,1/2}-42458_{1\,1/2}$	−19
3474.585	2	*MB*	28772.177			3483.492	25	*MB*	28698.612	$7818°_{1\,1/2}-36516_{1\,1/2}$	−38
3474.778	25	*MB*	28770.579	$7746°_{2\,1/2}-36516_{1\,1/2}$	−33	3483.512	8	*WA*	28698.447	$3793°_{6\,1/2}-32492_{5\,1/2}$	43
3474.992	10	*MB*	28768.808			3483.705	5	*MB*	28696.857		
3475.278	10	*MB*	28766.440			3483.825	5	*MB*	28695.868		
3475.565	10	*MB*	28764.065			3483.982	35	*MB*	28694.575	$10114°_{2\,1/2}-38809_{3\,1/2}$	−17
3475.666	90	*MB*	28763.229	$1873°_{3\,1/2}-30637_{2\,1/2}$	6	3484.132	12	*MB*	28693.340	$2382°_{4\,1/2}-31075_{4\,1/2}$	−16
3475.957	15	*MB*	28760.821	$16133_{2\,1/2}-44893°_{3\,1/2}$	76	3484.338	10	*MB*	28691.644		
3476.123	7	*MB*	28759.448			3484.599	40	*MB*	28689.495	$5118°_{2\,1/2}-33808_{2\,1/2}$	−15
3476.351	50	*MB*	28757.561	$5118°_{2\,1/2}-33876_{1\,1/2}$	−9	3484.695	50	*MB*	28688.704	$4459°_{3\,1/2}-33148_{2\,1/2}$	−12
3476.433	2	*MB*	28756.883	$4322°_{2\,1/2}-33079_{3\,1/2}$	79	3484.739	70	*MB*	28688.342	$2879°_{5\,1/2}-31568_{4\,1/2}$	18
3476.531	5	*MB*	28756.073			3485.046	650	*MB*	28685.815	$0°_{3\,1/2}-28685_{2\,1/2}$	57
3476.570	35	*MB*	28755.750	$1410°_{4\,1/2}-30166_{3\,1/2}$	−2	3485.556	7	*MB*	28681.618		
3476.830	440	*MB*	28753.600	$10641°_{2\,1/2}-39394_{3\,1/2}$	49	3485.730	15	*MB*	28680.186	$6517°_{2\,1/2}-35197_{1\,1/2}$	−34
3477.000	25	*MB*	28752.194			3485.767	20	*MB*	28679.882	$7522°_{5\,1/2}-36202_{4\,1/2}$	−52
3477.265	20	*MB*	28750.003	$9778°_{2\,1/2}-38529_{2\,1/2}$	−31	3486.266	45	*MB*	28675.777	$6549°_{2\,1/2}-35225_{2\,1/2}$	29
3477.388	30	*MB*	28748.986	$4910°_{5\,1/2}-33659_{5\,1/2}$	−18	3486.414	7	*MB*	28674.560	$8169°_{1\,1/2}-36844_{2\,1/2}$	−46
3477.446	40	*MB*	28748.506	$7059°_{4\,1/2}-35807_{4\,1/2}$	11	3486.493	35	*MB*	28673.910	$13784°_{1\,1/2}-42458_{1\,1/2}$	1
3477.557	7	*MB*	28747.589			3486.520	7	*MB*	28673.688	$9778°_{2\,1/2}-38452_{1\,1/2}$	−75
3477.631	12	*MB*	28746.977			3486.663	20	*MB*	28672.512	$4737°_{2\,1/2}-33409_{3\,1/2}$	−11
3477.984	40	*MB*	28744.059	$10088°_{1\,1/2}-38832_{2\,1/2}$	−9	3487.155	40	*MB*	28668.467	$8175°_{2\,1/2}-36844_{2\,1/2}$	25
3479.016	60	*MB*	28735.533			3487.381	20	*MB*	28666.609	$7259°_{3\,1/2}-35925_{3\,1/2}$	2
3479.153	10	*MB*	28734.402	$2634°_{2\,1/2}-31369_{2\,1/2}$	−24	3487.540	5	*MB*	28665.302		
3479.397	10	*MB*	28732.387			3487.624	5	*MB*	28664.611		
3479.598	90	*MB*	28730.727	$0°_{3\,1/2}-28730_{3\,1/2}$	15	3488.016	10	*MB*	28661.390		
3479.742	30	*MB*	28729.538	$11309_{7\,1/2}-40039°_{6\,1/2}$	−13	3488.100	15	*MB*	28660.700		
3479.981	25	*MB*	28727.565	$2641°_{3\,1/2}-31369_{2\,1/2}$	31	3488.375	25	*MB*	28658.441	$4201°_{1\,1/2}-32860_{0\,1/2}$	−18
				$4322°_{2\,1/2}-33050_{1\,1/2}$	−17	3488.548	160	*MB*	28657.019	$7059°_{4\,1/2}-35716_{5\,1/2}$	9
3480.273	60	*WA*	28725.155	$0°_{3\,1/2}-28725_{4\,1/2}$	7	3488.811	20	*WA*	28654.859	$1410°_{4\,1/2}-30065_{3\,1/2}$	0

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3488.882	10	*MB*	28654.276			3499.298	15	*MB*	28568.986	$3745°_{1\,1/2}-32314_{0\,1/2}$	−7
3489.208	10	*MB*	28651.599			3499.388	10	*MB*	28568.252	$4511°_{2\,1/2}-33079_{3\,1/2}$	−2
3489.282	5	*MB*	28650.991			3499.620	10	*MB*	28566.358	$2641°_{3\,1/2}-31207_{3\,1/2}$	−9
3489.379	15	*WA*	28650.195	$9198°_{3\,1/2}-37848_{2\,1/2}$	−28	3499.773	20	*MB*	28565.109		
3489.654	35	*MB*	28647.937	$6549°_{2\,1/2}-35197_{1\,1/2}$	5	3499.994	35	*MB*	28563.305	$5010°_{2\,1/2}-33574_{1\,1/2}$	31
3489.708	2	*MB*	28647.494			3500.064	25	*MB*	28562.734		
3490.123	130	*MB*	28644.088	$5651°_{5\,1/2}-34295_{4\,1/2}$	−4	3500.206	2	*MB*	28561.575		
3490.713	15	*WA*	28639.246	$2595°_{1\,1/2}-31234_{2\,1/2}$	12	3500.356	5	*MB*	28560.351		
3490.852	5	*MB*	28638.106			3500.604	5	*MB*	28558.328		
3490.947	5	*MB*	28637.327	$4511°_{2\,1/2}-33148_{2\,1/2}$	−4	3500.677	50b	*MB*	28557.733	$10274°_{3\,1/2}-38832_{2\,1/2}$	−4
3491.084	2	*MB*	28636.203			3500.805	10	*MB*	28556.688		
3491.128	5	*MB*	28635.842	$9634°_{1\,1/2}-38269_{0\,1/2}$	54	3500.831	25	*MB*	28556.476	$4523°_{4\,1/2}-33079_{3\,1/2}$	−2
3491.187	7	*MB*	28635.358			3501.031	5	*MT*	28554.845		
3491.278	2	*MB*	28634.612			3501.202	2	*MB*	28553.451		
3491.791	2	*MB*	28630.405			3501.453	150	*MB*	28551.404	$1873°_{3\,1/2}-30425_{2\,1/2}$	−10
3492.101	7	*MB*	28627.863			3501.810	30	*MB*	28548.493	$7259°_{3\,1/2}-35807_{4\,1/2}$	1
3492.247	20	*WA*	28626.667	$2581°_{4\,1/2}-31207_{3\,1/2}$	−2	3501.950	7	*MB*	28547.352		
3492.427	12	*MB*	28625.191			3502.105	5	*MB*	28546.088		
3492.981	25	*MB*	28620.651			3502.219	5	*MB*	28545.159		
3493.103	80	*WA*	28619.652	$5675°_{4\,1/2}-34295_{4\,1/2}$	−34	3502.316	5	*MB*	28544.369	$5969°_{5\,1/2}-34513_{6\,1/2}$	−91
				$4459°_{3\,1/2}-33079_{3\,1/2}$	12						
						3502.419	5	*MB*	28543.529		
3493.449	7	*WA*	28616.817	$5716°_{3\,1/2}-34333_{2\,1/2}$	−64	3502.639	25	*MB*	28541.737	$5010°_{2\,1/2}-33552_{2\,1/2}$	25
3493.529	10	*MB*	28616.162			3502.854	15	*MB*	28539.985	$4322°_{2\,1/2}-32862_{3\,1/2}$	−73
3493.724	90	*WA*	28614.565	$3703°_{3\,1/2}-32318_{3\,1/2}$	−15	3502.889	30	*WA*	28539.700	$5437°_{3\,1/2}-33977_{3\,1/2}$	−17
3493.833	2	*MB*	28613.672			3502.976	25	*MB*	28538.991	$6389°_{4\,1/2}-34928_{4\,1/2}$	−35
										$4511°_{2\,1/2}-33050_{1\,1/2}$	−42
3493.936	20	*MB*	28612.829	$8280°_{2\,1/2}-36893_{3\,1/2}$	5						
3493.989	12	*MB*	28612.395			3503.077	50	*MB*	28538.168	$12751°_{5\,1/2}-41289_{5\,1/2}$	−20
3494.246	2	*MB*	28610.290			3503.220	20	*MB*	28537.003		
3494.646	30	*WA*	28607.016	$5437°_{3\,1/2}-34044_{4\,1/2}$	−2	3503.342	1	*WA*	28536.009	$2634°_{2\,1/2}-31170_{1\,1/2}$	31
3494.837	7	*MB*	28605.452			3503.529	18	*MB*	28534.486	$10274°_{3\,1/2}-38809_{3\,1/2}$	−18
3495.001	70	*WA*	28604.110	$3593°_{4\,1/2}-32197_{4\,1/2}$	10	3503.619	25	*MB*	28533.753	$4511°_{2\,1/2}-33045_{2\,1/2}$	−84
3495.343	2	*MB*	28601.311			3503.779	5	*MB*	28532.450		
3495.421	10	*MB*	28600.673			3503.860	7	*MB*	28531.791		
3495.478	40	*WA*	28600.207	$2634°_{2\,1/2}-31234_{2\,1/2}$	−5	3503.934	12	*MB*	28531.188	$11340°_{3\,1/2}-39871_{4\,1/2}$	−46
3495.729	30	*WA*	28598.153	$12260°_{3\,1/2}-40858_{4\,1/2}$	37	3503.977	18	*MB*	28530.838	$6389°_{4\,1/2}-34920_{3\,1/2}$	−7
3495.939	90	*MB*	28596.436	$10798°_{2\,1/2}-39394_{3\,1/2}$	−1	3504.083	25	*MB*	28529.975	$8702°_{1\,1/2}-37232_{1\,1/2}$	−18
3496.015	35	*MB*	28595.814			3504.414	1	*WA*	28527.281	$12762°_{4\,1/2}-41289_{5\,1/2}$	−48
3496.318	70	*WA*	28593.336	$5283°_{0\,1/2}-33876_{1\,1/2}$	−11	3504.511	25	*MB*	28526.491	$2563°_{5\,1/2}-31089_{5\,1/2}$	−6
				$2641°_{3\,1/2}-31234_{2\,1/2}$	16	3504.860	2	*MB*	28523.650		
3496.582	18	*MB*	28591.177			3505.173	20	*MB*	28521.103	$8402°_{3\,1/2}-36923_{4\,1/2}$	−17
3496.633	20	*MB*	28590.760			3505.507	3	*WA*	28518.386		
3497.009	3	*WA*	28587.686			3505.955	5	*WA*	28514.742	$4201°_{1\,1/2}-32716_{2\,1/2}$	−11
3497.056	5	*MB*	28587.302			3506.219	15	*MB*	28512.595	$11325°_{2\,1/2}-39838_{2\,1/2}$	−68
3497.309	20	*MT*	28585.234	$4459°_{3\,1/2}-33045_{2\,1/2}$	11	3506.249	40	*WA*	28512.351	$2563°_{5\,1/2}-31075_{4\,1/2}$	−18
3497.362	12	*MB*	28584.801	$11454_{6\,1/2}-40039°_{6\,1/2}$	−21	3506.347	10	*MB*	28511.554		
3498.039	5	*MB*	28579.269	$5716°_{3\,1/2}-34295_{4\,1/2}$	35	3506.722	25	*MB*	28508.505	$2581°_{4\,1/2}-31089_{5\,1/2}$	32
3498.562	20	*WA*	28574.996	$2595°_{1\,1/2}-31170_{1\,1/2}$	−4	3507.010	10	*MB*	28506.164	$10035°_{5\,1/2}-38541_{4\,1/2}$	3
3498.661	20	*MB*	28574.188	$3363°_{2\,1/2}-31937_{3\,1/2}$	−37	3507.502	15	*MB*	28502.166		
3498.695	20	*MB*	28573.910	$7233°_{5\,1/2}-35807_{4\,1/2}$	−30	3507.542	7	*MB*	28501.841	$5924°_{1\,1/2}-34426_{2\,1/2}$	8
3499.188	10	*MB*	28569.884			3507.813	25	*MB*	28499.639	$7059°_{4\,1/2}-35558_{3\,1/2}$	9

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3507.938	190	*MB*	28498.623	$1410°_{4\,1/2}-29908_{4\,1/2}$	24	3515.283	20	*MB*	28439.079	$5716°_{3\,1/2}-34155_{3\,1/2}$	−15
3508.034	20	*MB*	28497.844	$11340°_{3\,1/2}-39838_{2\,1/2}$	−2	3515.387	12	*MB*	28438.237	$10454°_{1\,1/2}-38892_{0\,1/2}$	9
3508.126	10	*MB*	28497.096			3515.514	5	*MB*	28437.210		
3508.459	80	*MB*	28494.391	$3703°_{3\,1/2}-32197_{4\,1/2}$	4	3515.546	20	*MB*	28436.951	$2595°_{1\,1/2}-31032_{0\,1/2}$	−15
3508.703	60	*MB*	28492.410	$12365°_{4\,1/2}-40858_{4\,1/2}$	11	3515.629	40	*MB*	28436.280	$4201°_{1\,1/2}-32638_{1\,1/2}$	8
3508.862	15	*MB*	28491.119	$8402°_{3\,1/2}-36893_{3\,1/2}$	17	3515.774	40	*MB*	28435.107	$3703°_{3\,1/2}-32138_{2\,1/2}$	3
3509.063	10	*MB*	28489.487	$7713°_{4\,1/2}-36202_{4\,1/2}$	19	3515.907	15	*MB*	28434.031	$2641°_{3\,1/2}-31075_{4\,1/2}$	−12
3509.249	15	*MB*	28487.977	$3363°_{2\,1/2}-31851_{2\,1/2}$	7	3515.940	20	*MB*	28433.765	$5118°_{2\,1/2}-33552_{2\,1/2}$	−10
3509.430	2	*MB*	28486.508			3516.008	12	*MB*	28433.215	$10646_{5\,1/2}-39079°_{5\,1/2}$	−12
3509.723	40	*MB*	28484.130	$11387°_{3\,1/2}-39871_{4\,1/2}$	28	3516.361	7	*MB*	28430.360		
3509.931	30	*MB*	28482.442	$7233°_{5\,1/2}-35716_{5\,1/2}$	−13	3516.403	15	*MB*	28430.021		
3509.980	5	*MB*	28482.044			3516.520	5	*MB*	28429.075		
3510.061	2	*MB*	28481.387			3516.628	5	*MB*	28428.202		
3510.284	25	*MB*	28479.578	$5675°_{4\,1/2}-34155_{3\,1/2}$	30	3516.657	12	*MB*	28427.968		
3510.460	12	*MB*	28478.150			3516.748	5	*MB*	28427.232		
3510.681	50	*MB*	28476.357	$5819°_{4\,1/2}-34295_{4\,1/2}$	21	3516.834	2	*MB*	28426.537		
3510.773	20	*MB*	28475.611	$3793°_{6\,1/2}-32269_{7\,1/2}$	−6	3516.892	5	*MB*	28426.068		
3510.875	5	*MB*	28474.784			3516.973	3	*MB*	28425.413		
3510.998	2	*MB*	28473.786			3517.373	550	*MB*	28422.181	$7293°_{6\,1/2}-35716_{5\,1/2}$	36
3511.117	5	*MB*	28472.821			3517.736	10	*MB*	28419.248		
3511.200	5	*MB*	28472.148			3517.906	30	*MB*	28417.875	$3995°_{3\,1/2}-32413_{3\,1/2}$	−10
3511.302	12	*MB*	28471.321			3518.035	40	*MB*	28416.833	$6517°_{2\,1/2}-34934_{2\,1/2}$	29
3511.403	12	*MB*	28470.502	$7818°_{1\,1/2}-36288_{0\,1/2}$	−9	3518.141	5	*MB*	28415.976		
3511.459	3	*WA*	28470.048	$10924°_{4\,1/2}-39394_{3\,1/2}$	−68	3518.187	3	*MB*	28415.605		
3511.586	40	*MB*	28469.019	$9725_{3\,1/2}-38194°_{4\,1/2}$	24	3518.367	50b	*MB*	28414.151	$10114°_{2\,1/2}-38529_{2\,1/2}$	14
3511.734	15	*MB*	28467.819			3518.437	20	*MB*	28413.586		
3511.776	10	*MB*	28467.478			3518.641	5	*MB*	28411.939		
3511.895	10	*MB*	28466.514			3518.734	20	*MB*	28411.188	$4737°_{2\,1/2}-33148_{2\,1/2}$	−27
3512.046	2	*MB*	28465.290			3518.838	2	*MB*	28410.348		
3512.312	5	*MB*	28463.134			3518.909	5	*MB*	28409.775		
3512.420	5	*MB*	28462.259			3519.071	140	*MB*	28408.467	$2634°_{2\,1/2}-31043_{2\,1/2}$	23
3512.498	7	*MB*	28461.627			3519.284	12	*MB*	28406.748		
3512.559	18	*MB*	28461.133	$5964°_{3\,1/2}-34426_{2\,1/2}$	−7	3519.642	20	*MB*	28403.859		
3512.685	10	*MB*	28460.112			3519.724	50	*MB*	28403.197	$6517°_{2\,1/2}-34920_{3\,1/2}$	28
3512.820	2	*MB*	28459.018			3519.759	20	*MB*	28402.914	$4459°_{3\,1/2}-32862_{3\,1/2}$	20
3513.274	25	*MB*	28455.341	$5118°_{2\,1/2}-33574_{1\,1/2}$	2	3519.928	20	*WA*	28401.551	$2641°_{3\,1/2}-31043_{2\,1/2}$	0
3513.469	20	*MB*	28453.761	$9198°_{3\,1/2}-37652_{2\,1/2}$	−3	3520.243	30	*MB*	28399.009	$5010°_{2\,1/2}-33409_{3\,1/2}$	−17
3513.659	5	*MB*	28452.223			3520.314	7	*MB*	28398.437		
3513.783	40	*MB*	28451.219	$987°_{4\,1/2}-29438_{5\,1/2}$	13	3520.517	190	*MB*	28396.799	$1410°_{4\,1/2}-29807_{3\,1/2}$	26
3513.847	60	*MB*	28450.701	$11387°_{3\,1/2}-39838_{2\,1/2}$	−12	3520.805	15	*WA*	28394.476	$5513_{5\,1/2}-33908°_{4\,1/2}$	−7
3513.900	12	*MB*	28450.271	$4266°_{3\,1/2}-32716_{2\,1/2}$	22	3520.874	15	*MB*	28393.920	$4322°_{2\,1/2}-32716_{2\,1/2}$	−18
3514.098	12	*MB*	28448.668			3520.928	18	*MB*	28393.485		
3514.161	2	*MB*	28448.158			3520.977	40	*MB*	28393.089	$5651°_{5\,1/2}-34044_{4\,1/2}$	6
3514.250	12	*MB*	28447.438	$2595°_{1\,1/2}-31043_{2\,1/2}$	−27	3521.123	20	*MB*	28391.912	$8804°_{4\,1/2}-37196_{4\,1/2}$	−2
3514.321	25	*MB*	28446.863	$2382°_{4\,1/2}-30829_{3\,1/2}$	−14	3521.183	18	*MB*	28391.428	$7746°_{2\,1/2}-36137_{2\,1/2}$	10
3514.489	7	*MB*	28445.504			3521.326	20	*MB*	28390.275	$5942°_{3\,1/2}-34333_{2\,1/2}$	−24
3514.718	5	*MB*	28443.658			3521.400	5	*MB*	28389.679		
3514.926	12	*MB*	28441.967			3521.872	300	*MB*	28385.874	$4910°_{5\,1/2}-33296_{4\,1/2}$	32
3514.966	15	*WA*	28441.643	$8402°_{3\,1/2}-36844_{2\,1/2}$	7	3522.030	15	*MB*	28384.601	$6549°_{2\,1/2}-34934_{2\,1/2}$	88
3515.122	7	*MB*	28440.381	$10888°_{1\,1/2}-38529_{2\,1/2}$	0	3522.080	15	*MB*	28384.198	$1410°_{4\,1/2}-29794_{3\,1/2}$	−14

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TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3522.262	7	*MB*	28382.731			3530.300	7	*MB*	28318.109		
3522.450	12	*MB*	28381.216	$3854_{3\,1/2}$ $-32235°_{3\,1/2}$	−10	3530.631	35	*MB*	28315.455	$4322°_{2\,1/2}-32638_{1\,1/2}$	−1
3522.608	5	*MB*	28379.944			3530.732	7	*MB*	28314.645		
3522.722	5	*MB*	28379.025			3530.946	80	*MB*	28312.929	$9491°_{0\,1/2}-37804_{1\,1/2}$	−11
3522.771	7	*MB*	28378.630	$12097_{3\,1/2}$ $-40475°_{3\,1/2}$	−18					$4737°_{2\,1/2}-33050_{1\,1/2}$	11
3522.799	15	*MB*	28378.405	$10454°_{1\,1/2}-38832_{2\,1/2}$	−31	3531.165	1	*MB*	28311.173		
3522.959	10	*MB*	28377.116	$987°_{4\,1/2}-29364_{3\,1/2}$	−12	3531.431	7	*MB*	28309.041		
3523.101	40	*MB*	28375.972	$10703_{4\,1/2}$ $-39079°_{5\,1/2}$	−20	3531.590	60b	*MB*	28307.766	$12365°_{4\,1/2}-40673_{5\,1/2}$	−2
3523.332	1	*MB*	28374.112	$5437°_{3\,1/2}-33811_{4\,1/2}$	−32	3531.867	7	*MB*	28305.546	$4201°_{1\,1/2}-32507_{1\,1/2}$	−2
3523.605	20	*MB*	28371.914	$1873°_{3\,1/2}-30245_{4\,1/2}$	−29	3531.975	2	*MB*	28304.680		
3523.733	25	*MB*	28370.883	$6549°_{2\,1/2}-34920_{3\,1/2}$	3	3532.086	5	*MB*	28303.791	$18393_{3\,1/2}$ $-46697°_{4\,1/2}$	34
				$5437°_{3\,1/2}-33808_{2\,1/2}$	−11	3532.265	2	*MB*	28302.357		
3524.008	40	*MB*	28368.669	$5675°_{4\,1/2}-34044_{4\,1/2}$	−8	3532.388	20	*MB*	28301.371	$5675°_{4\,1/2}-33977_{3\,1/2}$	−5
3524.073	80	*WA*	28368.146	$5964°_{3\,1/2}-34333_{2\,1/2}$	−55	3532.602	80	*MB*	28299.657	$7259°_{3\,1/2}-35558_{3\,1/2}$	30
3524.358	12	*MB*	28365.852	$7746°_{2\,1/2}-36112_{3\,1/2}$	16	3532.649	7	*MB*	28299.280		
				$2595°_{1\,1/2}-30961_{1\,1/2}$	−21						
						3532.700	5	*MB*	28298.872		
3524.532	2	*MB*	28364.452			3532.871	80	*MB*	28297.502	$0°_{3\,1/2}-28297_{3\,1/2}$	29
3524.700	1	*MB*	28363.100			3532.914	5	*MB*	28297.158		
3525.003	12	*MB*	28360.662			3533.012	2	*MB*	28296.373	$10641°_{2\,1/2}-38937_{1\,1/2}$	0
3525.133	7	*MB*	28359.616			3533.086	5	*MB*	28295.780		
3525.215	2	*MB*	28358.956			3533.113	20	*MB*	28295.564	$6517°_{2\,1/2}-34813_{2\,1/2}$	−18
3525.326	20	*MB*	28358.063			3533.318	7	*MB*	28293.922		
3525.454	5	*MB*	28357.034			3533.377	12	*MB*	28293.450	$17571_{4\,1/2}$ $-45864°_{5\,1/2}$	−98
3525.560	10	*MB*	28356.181	$7202°_{2\,1/2}-35558_{3\,1/2}$	9	3533.548	18	*MB*	28292.081	$1873°_{3\,1/2}-30166_{3\,1/2}$	−41
3525.626	2	*MB*	28355.650			3533.576	50	*MB*	28291.856	$6521°_{1\,1/2}-34813_{2\,1/2}$	−13
3525.929	20	*MB*	28353.214	$19136°_{2\,1/2}-47489_{3\,1/2}$	−41	3533.672	15	*MB*	28291.088	$5283°_{0\,1/2}-33574_{1\,1/2}$	−27
3525.999	18	*MB*	28352.651	$5942°_{3\,1/2}-34295_{4\,1/2}$	0					$5118°_{2\,1/2}-33409_{3\,1/2}$	−2
3526.140	7	*MB*	28351.517	$4511°_{2\,1/2}-32862_{3\,1/2}$	7	3533.718	12	*MB*	28290.720	$6638°_{4\,1/2}-34928_{4\,1/2}$	9
3526.685	190	*WA*	28347.136	$12326°_{6\,1/2}-40673_{5\,1/2}$	−21	3534.043	550	*MB*	28288.118	$4203°_{6\,1/2}-32492_{5\,1/2}$	14
3527.104	15	*MB*	28343.769	$3593°_{4\,1/2}-31937_{3\,1/2}$	−1	3534.152	15	*MB*	28287.246	$7059°_{4\,1/2}-35346_{3\,1/2}$	36
3527.150	2	*MB*	28343.399			3534.437	140	*MB*	28284.965	$7522°_{5\,1/2}-35807_{4\,1/2}$	19
3527.254	7	*MB*	28342.563			3534.741	25	*MB*	28282.532	$6638°_{4\,1/2}-34920_{3\,1/2}$	2
3527.309	10	*MB*	28342.121	$4737°_{2\,1/2}-33079_{3\,1/2}$	−17	3535.046	30	*WA*	28280.092	$11759_{5\,1/2}$ $-40039°_{6\,1/2}$	35
3527.606	40	*MB*	28339.735	$4523°_{4\,1/2}-32862_{3\,1/2}$	1	3535.566	80	*WA*	28275.933	$2879°_{5\,1/2}-31155_{6\,1/2}$	5
3527.841	110	*MB*	28337.848	$10114°_{2\,1/2}-38452_{1\,1/2}$	−18	3535.688	12	*MB*	28274.957	$13758°_{1\,1/2}-42033_{2\,1/2}$	−27
				$0°_{3\,1/2}-28337_{2\,1/2}$	34						
						3535.757	15	*MB*	28274.405		
3528.044	60	*MB*	28336.217	$5819°_{4\,1/2}-34155_{3\,1/2}$	19	3535.967	7	*MB*	28272.726		
3528.229	2	*MB*	28334.731	$0°_{3\,1/2}-28334_{4\,1/2}$	−24	3536.175	3	*MB*	28271.063		
3528.353	5	*MB*	28333.736			3536.425	10	*MB*	28269.065		
3528.633	40b	*MB*	28331.487	$12751°_{5\,1/2}-41083_{4\,1/2}$	−24	3536.479	20	*PK*	28268.633	$8927°_{5\,1/2}-37196_{4\,1/2}$	8
3528.747	12	*MB*	28330.572	$5964°_{3\,1/2}-34295_{4\,1/2}$	18	3536.610	5	*MB*	28267.586		
3529.038	40	*MB*	28328.236	$5716°_{3\,1/2}-34044_{4\,1/2}$	11	3536.696	100	*WA*	28266.899	$10274°_{3\,1/2}-38541_{4\,1/2}$	−2
3529.179	20	*MB*	28327.104	$20940_{3\,1/2}$ $-49267°_{4\,1/2}$	−38	3536.844	2	*MB*	28265.716		
3529.260	30	*MB*	28326.454	$5969°_{5\,1/2}-34295_{4\,1/2}$	11	3537.146	60	*MB*	28263.303	$6549°_{2\,1/2}-34813_{2\,1/2}$	9
3529.536	12	*MB*	28324.239	$7878°_{3\,1/2}-36202_{4\,1/2}$	10	3537.237	5	*MB*	28262.576		
3529.731	20	*MB*	28322.674	$3995°_{3\,1/2}-32318_{3\,1/2}$	−40	3537.438	100b	*WA*	28260.970	$5716°_{3\,1/2}-33977_{3\,1/2}$	46
3529.841	2	*MB*	28321.792			3537.653	5	*MB*	28259.252	$7878°_{3\,1/2}-36137_{2\,1/2}$	−23
3529.889	5	*MB*	28321.407			3537.961	2	*WA*	28256.792	$4459°_{3\,1/2}-32716_{2\,1/2}$	17
3530.016	150	*MB*	28320.388	$2382°_{4\,1/2}-30702_{4\,1/2}$	24	3538.222	4	*WA*	28254.708	$7202°_{2\,1/2}-35457_{1\,1/2}$	−80
3530.132	25	*MB*	28319.457	$7818°_{1\,1/2}-36137_{2\,1/2}$	0	3538.304	15	*WA*	28254.053	$10274°_{3\,1/2}-38529_{2\,1/2}$	3

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3538.347	5	*MB*	28253.710			3547.137	2	*MB*	28183.697		
3538.759	30	*WA*	28250.420	$9723°_{4\,1/2}-37973_{3\,1/2}$	−20	3547.203	15	*MB*	28183.173		
3538.804	25	*MB*	28250.061	$6517°_{2\,1/2}-34767_{1\,1/2}$	−10	3547.383	10	*MB*	28181.743		
3538.960	3	*MT*	28248.816	$13784°_{1\,1/2}-42033_{2\,1/2}$	−4	3547.433	10	*MB*	28181.346	$10088°_{1\,1/2}-38269_{0\,1/2}$	12
3539.076	700	*MB*	28247.890	$2581°_{4\,1/2}-30829_{3\,1/2}$	23	3547.669	10	*MB*	28179.471	$7746°_{2\,1/2}-35925_{3\,1/2}$	−25
3539.270	10	*MB*	28246.342	$6521°_{1\,1/2}-34767_{1\,1/2}$	−16	3547.731	12	*MB*	28178.979	$987°_{4\,1/2}-29166_{4\,1/2}$	−6
3539.373	3	*MB*	28245.520			3547.805	25	*MB*	28178.391	$7278°_{1\,1/2}-35457_{1\,1/2}$	−4
3539.678	1	*MB*	28243.086			3547.867	20	*MB*	28177.899		
3539.835	20	*MB*	28241.833	$5924°_{1\,1/2}-34166_{1\,1/2}$	−1	3548.066	3	*MB*	28176.318		
3540.188	2	*MB*	28239.017			3548.215	12	*MB*	28175.135		
3540.551	5	*MB*	28236.122			3548.273	5	*MB*	28174.674		
3540.587	7	*MB*	28235.835	$8280°_{2\,1/2}-36516_{1\,1/2}$	−16	3548.515	12	*MB*	28172.753		
3540.661	7	*MB*	28235.245			3548.610	12	*MB*	28171.999		
3540.805	5	*WA*	28234.097	$3703°_{3\,1/2}-31937_{3\,1/2}$	38	3548.798	12	*MB*	28170.507		
3540.853	15	*MB*	28233.714	$7878°_{3\,1/2}-36112_{3\,1/2}$	21	3548.830	60	*MB*	28170.252	$9634°_{1\,1/2}-37804_{1\,1/2}$	5
3541.205	18	*MB*	28230.907	$19920°_{3\,1/2}-48151_{4\,1/2}$	−18	3549.108	25	*MB*	28168.046	$10641°_{2\,1/2}-38809_{3\,1/2}$	12
3541.491	20	*MB*	28228.628			3549.327	20	*MB*	28166.308		
3541.533	7	*MB*	28228.293			3550.107	5	*MB*	28160.120	$5651°_{5\,1/2}-33811_{4\,1/2}$	−89
3541.624	2	*MB*	28227.568			3550.236	25	*MB*	28159.096		
3541.653	40	*MB*	28227.337	$3703°_{3\,1/2}-31930_{4\,1/2}$	−4	3550.370	18	*MB*	28158.034	$5819°_{4\,1/2}-33977_{3\,1/2}$	7
3541.907	25	*MB*	28225.312	$5819°_{4\,1/2}-34044_{4\,1/2}$	−15	3550.432	5	*MB*	28157.542		
3542.268	25	*MB*	28222.436			3550.535	12	*MB*	28156.725		
3542.750	5	*MB*	28218.596			3550.700	2	*MB*	28155.417		
3542.853	7	*MB*	28217.776	$6549°_{2\,1/2}-34767_{1\,1/2}$	−6	3550.755	3	*MB*	28154.981	$16268_{1\,1/2}-44423°_{1\,1/2}$	79
3542.997	10	*MB*	28216.629			3550.929	1	*MB*	28153.601		
3543.282	80	*MB*	28214.360	$9634°_{1\,1/2}-37848_{2\,1/2}$	−3	3551.347	3	*MB*	28150.287		
3543.512	40	*MB*	28212.528	$5942°_{3\,1/2}-34155_{3\,1/2}$	16	3551.427	80	*MB*	28149.653	$2595°_{1\,1/2}-30745_{1\,1/2}$	12
3543.678	25	*MB*	28211.207	$17232_{7\,1/2}-45443°_{7\,1/2}$	0	3551.662	100b	*MB*	28147.791	$3703°_{3\,1/2}-31851_{2\,1/2}$	−11
3543.825	10	*MB*	28210.037	$2879°_{5\,1/2}-31089_{5\,1/2}$	1	3551.769	20	*MB*	28146.943	$4266°_{3\,1/2}-32413_{3\,1/2}$	−5
3544.200	12	*MB*	28207.052	$4165_{4\,1/2}-32372°_{4\,1/2}$	−18	3551.907	10	*MB*	28145.849		
3544.375	12	*MB*	28205.659	$4844°_{1\,1/2}-33050_{1\,1/2}$	13	3552.064	50b	*MB*	28144.606	$3593°_{4\,1/2}-31738_{5\,1/2}$	4
3544.408	7	*MB*	28205.397	$4511°_{2\,1/2}-32716_{2\,1/2}$	7	3552.135	10	*MB*	28144.043	$9198°_{3\,1/2}-37342_{2\,1/2}$	42
3544.581	10	*MB*	28204.020			3552.239	17	*MB*	28143.219	$3995°_{3\,1/2}-32138_{2\,1/2}$	−18
3544.770	25	*MB*	28202.516	$3995°_{3\,1/2}-32197_{4\,1/2}$	−5	3552.475	1	*MB*	28141.349		
3544.876	1	*MB*	28201.673			3552.722	220	*MB*	28139.393	$2563°_{5\,1/2}-30702_{4\,1/2}$	16
3544.974	2	*MB*	28200.894			3552.929	25	*WA*	28137.753	$5010°_{2\,1/2}-33148_{2\,1/2}$	35
3545.031	12	*MB*	28200.440	$4844°_{1\,1/2}-33045_{2\,1/2}$	−10	3553.151	12	*MB*	28135.996	$7061°_{0\,1/2}-35197_{1\,1/2}$	−5
3545.601	190	*MB*	28195.907	$2879°_{5\,1/2}-31075_{4\,1/2}$	0	3553.352	1	*MB*	28134.404		
3545.695	12	*MB*	28195.159	$3363°_{2\,1/2}-31558_{3\,1/2}$	−39	3553.466	3	*MB*	28133.501		
3545.748	40	*MB*	28194.738	$9778°_{2\,1/2}-37973_{3\,1/2}$	−51	3553.498	2	*MB*	28133.248		
3545.783	60	*MB*	28194.459	$2634°_{2\,1/2}-30829_{3\,1/2}$	2	3553.847	1	*MB*	28130.485	$17000_{3\,1/2}-45130°_{2\,1/2}$	−36
3545.910	50	*MB*	28193.450	$7522°_{5\,1/2}-35716_{5\,1/2}$	−11	3553.951	7	*MB*	28129.662	$11742°_{5\,1/2}-39871_{4\,1/2}$	74
3546.186	260	*MB*	28191.255	$10641°_{2\,1/2}-38832_{2\,1/2}$	−11	3554.126	2	*MB*	28128.277		
				$1873°_{3\,1/2}-30065_{3\,1/2}$	26	3554.301	15	*WA*	28126.892	$4511°_{2\,1/2}-32638_{1\,1/2}$	−15
3546.376	1	*MB*	28189.745			3554.420	2	*MB*	28125.951		
3546.517	10	*MB*	28188.624			3554.491	12	*MB*	28125.389	$4737°_{2\,1/2}-32862_{3\,1/2}$	−4
3546.651	90	*MB*	28187.559	$2641°_{3\,1/2}-30829_{3\,1/2}$	−5	3554.543	6	*MB*	28124.978		
3546.829	15	*MB*	28186.145	$13012°_{2\,1/2}-41198_{2\,1/2}$	−68	3554.633	100	*WA*	28124.265	$9491°_{0\,1/2}-37615_{0\,1/2}$	25
3547.006	140	*MB*	28184.738	$4322°_{2\,1/2}-32507_{1\,1/2}$	4	3555.001	380	*MB*	28121.354	$2581°_{4\,1/2}-30702_{4\,1/2}$	1
3547.071	2	*MB*	28184.222			3555.128	5	*MB*	28120.349		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3555.158	60	*MB*	28120.112	$1873°_{3\,1/2}-29994_{2\,1/2}$	5	3563.221	3	*MB*	28056.483		
3555.227	20	*MB*	28119.566	$8804°_{4\,1/2}-36923_{4\,1/2}$	2	3563.820	100	*MB*	28051.767	$4266°_{3\,1/2}-32318_{3\,1/2}$	−10
3555.298	5	*MB*	28119.005	$8169°_{1\,1/2}-36288_{0\,1/2}$	44	3564.377	20	*MB*	28047.384	$7878°_{3\,1/2}-35925_{3\,1/2}$	30
3555.372	1	*MB*	28118.420			3564.443	10	*MB*	28046.864		
3555.699	5	*MB*	28115.834			3564.561	2	*MB*	28045.936		
3555.786	30	*MB*	28115.146	$5437°_{3\,1/2}-33552_{2\,1/2}$	−13	3564.606	2	*MB*	28045.582		
3555.943	12	*MB*	28113.905			3564.722	18	*MB*	28044.669	$12466°_{1\,1/2}-40511_{1\,1/2}$	−27
3556.098	8	*WA*	28112.679	$3854_{3\,1/2}-31966°_{2\,1/2}$	−56	3564.893	7	*MB*	28043.324		
3556.110	30	*MB*	28112.584	$4201°_{1\,1/2}-32314_{0\,1/2}$	9	3565.124	7	*MB*	28041.507	$2595°_{1\,1/2}-30637_{2\,1/2}$	−5
3556.270	2	*MB*	28111.320			3565.339	12	*MB*	28039.816		
3556.331	2	*MB*	28110.837			3565.424	30	*MB*	28039.148	$9491°_{0\,1/2}-37530_{1\,1/2}$	8
3556.363	30	*MB*	28110.585	$2634°_{2\,1/2}-30745_{1\,1/2}$	−34	3565.715	6	*MB*	28036.860		
3556.892	60	*MB*	28106.404	$12751°_{5\,1/2}-40858_{4\,1/2}$	−18	3565.867	7	*MB*	28035.664		
3557.230	15	*MB*	28103.733			3566.033	12	*WA*	28034.359	$5942°_{3\,1/2}-33977_{3\,1/2}$	18
3557.380	10	*MB*	28102.549			3566.055	10	*MB*	28034.186	$10798°_{2\,1/2}-38832_{2\,1/2}$	33
										$5010°_{2\,1/2}-33045_{2\,1/2}$	−38
3557.459	10	*MB*	28101.924	$10035°_{5\,1/2}-38137_{5\,1/2}$	−46						
3557.494	30	*MB*	28101.648	$5942°_{3\,1/2}-34044_{4\,1/2}$	5	3566.111	12	*MB*	28033.746		
3557.610	7	*MB*	28100.732			3566.479	40	*WA*	28030.854	$13027_{6\,1/2}-41058°_{7\,1/2}$	−1
3557.875	10	*MB*	28098.639	$10035°_{5\,1/2}-38134_{4\,1/2}$	−49	3566.664	3	*MB*	28029.400		
3557.915	12	*MB*	28098.323			3566.776	20	*MB*	28028.520	$1410°_{4\,1/2}-29438_{5\,1/2}$	7
3557.960	2	*MB*	28097.967			3566.832	10	*MB*	28028.080		
3558.107	3	*MB*	28096.807			3567.166	3	*WA*	28025.455	$9778°_{2\,1/2}-37804_{1\,1/2}$	8
3558.204	2	*MB*	28096.041			3567.432	7	*MB*	28023.366		
3558.291	15	*MB*	28095.354	$5716°_{3\,1/2}-33811_{4\,1/2}$	3	3567.466	7	*MB*	28023.099	$7202°_{2\,1/2}-35225_{2\,1/2}$	−27
3558.367	10	*MB*	28094.754	$19950_{6\,1/2}-48045°_{6\,1/2}$	−5	3567.554	2	*MB*	28022.407		
3558.401	12	*MB*	28094.485	$7713°_{4\,1/2}-35807_{4\,1/2}$	7	3567.735	20	*MB*	28020.986		
3558.702	35	*MB*	28092.109	$5716°_{3\,1/2}-33808_{2\,1/2}$	8	3567.777	7	*MB*	28020.656	$3745°_{1\,1/2}-31766_{1\,1/2}$	22
3558.822	10	*MB*	28091.162	$14481°_{2\,1/2}-42573_{3\,1/2}$	−98	3567.824	7	*MB*	28020.287		
3558.887	20	*MB*	28090.649	$4322°_{2\,1/2}-32413_{3\,1/2}$	11	3568.123	110	*MB*	28017.939	$9634°_{1\,1/2}-37652_{2\,1/2}$	34
3559.024	15	*MB*	28089.568	$8804°_{4\,1/2}-36893_{3\,1/2}$	22	3568.238	2	*MB*	28017.036		
3559.323	30	*MB*	28087.208	$7259°_{3\,1/2}-35346_{3\,1/2}$	1	3568.405	7	*MB*	28015.725	$4844°_{1\,1/2}-32860_{0\,1/2}$	16
3559.567	2	*MB*	28085.283			3568.929	1	*MB*	28011.612		
3559.607	7	*MB*	28084.967			3569.018	12	*MB*	28010.913	$10798°_{2\,1/2}-38809_{3\,1/2}$	−7
3559.851	3	*MB*	28083.042			3569.311	80	*MB*	28008.614	$5651°_{5\,1/2}-33659_{5\,1/2}$	3
3560.068	10	*MB*	28081.330			3569.482	20	*MB*	28007.272	$11387°_{3\,1/2}-39394_{3\,1/2}$	10
3560.196	1	*MB*	28080.321			3569.688	10	*MB*	28005.656	$3363°_{2\,1/2}-31369_{2\,1/2}$	−9
3560.294	12	*MB*	28079.548	$5964°_{3\,1/2}-34044_{4\,1/2}$	3	3570.028	20	*WA*	28002.989	$7713°_{4\,1/2}-35716_{5\,1/2}$	−4
3560.609	10	*MB*	28077.064			3570.088	2	*WA*	28002.518	$2634°_{2\,1/2}-30637_{2\,1/2}$	27
3560.798	1100	*MB*	28075.574	$5455°_{7\,1/2}-33531_{6\,1/2}$	31	3570.421	2	*MB*	27999.906		
3560.900	15	*MB*	28074.769	$10454°_{1\,1/2}-38529_{2\,1/2}$	21	3570.539	2	*MB*	27998.981		
3561.111	10	*MB*	28073.106	$13012°_{2\,1/2}-41085_{3\,1/2}$	−12	3570.610	1	*MB*	27998.424	$10454°_{1\,1/2}-38452_{1\,1/2}$	−53
3561.542	40	*MB*	28069.709	$4165_{4\,1/2}-32235°_{3\,1/2}$	20	3570.883	12	*MB*	27996.284	$8927°_{5\,1/2}-36923_{4\,1/2}$	9
3561.600	20	*MB*	28069.252	$11325°_{2\,1/2}-39394_{3\,1/2}$	40	3570.983	40	*MB*	27995.500	$4322°_{2\,1/2}-32318_{3\,1/2}$	33
3561.675	12	*MB*	28068.661	$5010°_{2\,1/2}-33079_{3\,1/2}$	19	3571.372	20	*MB*	27992.451	$5819°_{4\,1/2}-33811_{4\,1/2}$	−2
3562.097	80	*MB*	28065.336	$4203°_{6\,1/2}-32269_{7\,1/2}$	18	3571.738	2	*MB*	27989.582	$13758°_{1\,1/2}-41748_{1\,1/2}$	−26
3562.284	5	*MB*	28063.862			3571.894	1	*MB*	27988.360		
3562.641	20	*MB*	28061.050	$2641°_{3\,1/2}-30702_{4\,1/2}$	0	3572.248	3	*MB*	27985.586		
3562.995	7	*MB*	28058.262			3572.425	110	*MB*	27984.200	$5675°_{4\,1/2}-33659_{5\,1/2}$	−4
3563.034	12	*MB*	28057.955			3572.658	20	*MB*	27982.375		
3563.142	3	*MB*	28057.105			3572.763	25	*MB*	27981.553	$9634°_{1\,1/2}-37615_{0\,1/2}$	5

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3573.044	25	*MB*	27979.352	$4737°_{2\,1/2}-32716_{2\,1/2}$	78	3583.100	30	*PK*	27900.830	$4737°_{2\,1/2}-32638_{1\,1/2}$	38
3573.163	1	*MB*	27978.420			3583.347	2	*MB*	27898.907		
3573.584	20	*MB*	27975.124			3583.372	3	*MB*	27898.712		
3573.707	80	*MB*	27974.162	$3593°_{4\,1/2}-31568_{4\,1/2}$	25	3583.661	80	*MB*	27896.462	$9634°_{1\,1/2}-37530_{1\,1/2}$	16
3573.928	10	*MB*	27972.432	$5437°_{3\,1/2}-33409_{3\,1/2}$	−42	3583.726	15	*MB*	27895.956		
3574.174	6	*MB*	27970.506			3583.834	12	*MB*	27895.116	$15565°_{2\,1/2}-43460_{2\,1/2}$	3
3574.199	7	*MB*	27970.311			3583.897	5	*MB*	27894.626		
3574.366	7	*MB*	27969.004	$16454_{2\,1/2}-44423°_{1\,1/2}$	−15	3583.956	3	*MB*	27894.166	$5283°_{0\,1/2}-33177_{0\,1/2}$	0
				$4523°_{4\,1/2}-32492_{5\,1/2}$	0	3583.977	20	*MB*	27894.003	$6967_{6\,1/2}-34861°_{5\,1/2}$	24
3574.507	10	*MB*	27967.901	$8169°_{1\,1/2}-36137_{2\,1/2}$	−4	3584.140	2	*MB*	27892.734		
3574.672	20	*WA*	27966.610	$7259°_{3\,1/2}-35225_{2\,1/2}$	29	3584.336	100	*MB*	27891.209	$4910°_{5\,1/2}-32802_{5\,1/2}$	7
3574.911	25	*MB*	27964.740	$3593°_{4\,1/2}-31558_{3\,1/2}$	−3	3584.447	20	*WA*	27890.345	$4523°_{4\,1/2}-32413_{3\,1/2}$	33
3575.001	3	*MB*	27964.036			3584.587	18	*MB*	27889.256	$11949°_{3\,1/2}-39838_{2\,1/2}$	0
3575.073	30	*WA*	27963.473	$13784°_{1\,1/2}-41748_{1\,1/2}$	28	3584.802	30	*MB*	27887.584	$10641°_{2\,1/2}-38529_{2\,1/2}$	5
3575.182	20	*MB*	27962.621	$9269°_{0\,1/2}-37232_{1\,1/2}$	9	3585.198	18	*MB*	27884.503	$10924°_{4\,1/2}-38809_{3\,1/2}$	−96
3575.295	40	*MB*	27961.737	$8175°_{2\,1/2}-36137_{2\,1/2}$	−3	3585.395	7	*MB*	27882.971	$13217_{3\,1/2}-41100°_{2\,1/2}$	15
3576.228	190	*MB*	27954.442	$1410°_{4\,1/2}-29364_{3\,1/2}$	6	3585.471	1	*MB*	27882.380		
3576.519	7	*MB*	27952.168	$5924°_{1\,1/2}-33876_{1\,1/2}$	−4	3585.540	3	*MB*	27881.844		
3576.720	7	*MB*	27950.597			3585.698	7	*MB*	27880.615	$10314_{4\,1/2}-38194°_{4\,1/2}$	49
3576.918	7	*MB*	27949.050	$17000_{3\,1/2}-44949°_{4\,1/2}$	46	3585.779	7	*MB*	27879.985	$5651°_{5\,1/2}-33531_{6\,1/2}$	−45
3577.197	25	*MB*	27946.870	$19483_{2\,1/2}-47430°_{3\,1/2}$	−88	3586.172	10	*MB*	27876.930		
3577.450	950	*MB*	27944.894	$3793°_{6\,1/2}-31738_{5\,1/2}$	44	3586.279	7	*MB*	27876.098	$6549°_{2\,1/2}-34426_{2\,1/2}$	−30
3577.798	2	*WA*	27942.176	$3995°_{3\,1/2}-31937_{3\,1/2}$	−16	3586.334	7	*MB*	27875.671		
3578.201	10	*MB*	27939.029			3586.557	7	*MB*	27873.938		
3578.296	7	*MB*	27938.287			3586.770	80	*MB*	27872.282	$4266°_{3\,1/2}-32138_{2\,1/2}$	−18
3578.488	7	*MB*	27936.788	$4201°_{1\,1/2}-32138_{2\,1/2}$	−16	3586.806	10	*MB*	27872.003	$4844°_{1\,1/2}-32716_{2\,1/2}$	0
3578.527	3	*MB*	27936.483			3586.877	12	*MB*	27871.451	$3363°_{2\,1/2}-31234_{2\,1/2}$	0
3578.570	7	*MB*	27936.148	$8175°_{2\,1/2}-36112_{3\,1/2}$	−9	3587.078	20	*MB*	27869.889	$7059°_{4\,1/2}-34928_{4\,1/2}$	−7
3578.661	18	*MB*	27935.437	$3995°_{3\,1/2}-31930_{4\,1/2}$	−38	3587.221	40	*MB*	27868.778	$5942°_{3\,1/2}-33811_{4\,1/2}$	10
3578.738	40	*MB*	27934.836	$10035°_{5\,1/2}-37970_{5\,1/2}$	16	3587.259	1	*MB*	27868.483		
				$7522°_{0\,1/2}-35457_{1\,1/2}$	−23						
						3587.456	25	*MB*	27866.953		
3578.810	20	*MB*	27934.275			3587.640	150	*MB*	27865.524	$5942°_{3\,1/2}-33808_{2\,1/2}$	5
3578.951	20	*MB*	27933.174	$1873°_{3\,1/2}-29807_{3\,1/2}$	30	3587.685	30	*MB*	27865.174	$9723°_{4\,1/2}-37588_{3\,1/2}$	37
3579.157	15	*MB*	27931.566	$4266°_{3\,1/2}-32197_{4\,1/2}$	−18	3587.780	7	*MB*	27864.436	$3703°_{3\,1/2}-31568_{4\,1/2}$	12
3579.193	10	*MB*	27931.285			3587.862	5	*MB*	27863.800		
3579.452	10	*MB*	27929.264	$7878°_{3\,1/2}-35807_{4\,1/2}$	25	3587.884	5	*MB*	27863.629	$2382°_{4\,1/2}-30245_{4\,1/2}$	−2
3579.782	3	*MB*	27926.690			3588.128	80	*MB*	27861.734	$7059°_{4\,1/2}-34920_{3\,1/2}$	18
3579.836	10	*MB*	27926.269	$5118°_{2\,1/2}-33045_{2\,1/2}$	−19	3588.425	150	*MB*	27859.428	$10274°_{3\,1/2}-38134_{4\,1/2}$	0
3580.300	10	*MB*	27922.649	$11949°_{3\,1/2}-39871_{4\,1/2}$	6	3588.495	50	*MB*	27858.885	$10114°_{2\,1/2}-37973_{3\,1/2}$	−7
3580.355	7	*MB*	27922.221			3588.569	15	*MB*	27858.310	$4459°_{3\,1/2}-32318_{3\,1/2}$	7
3580.438	3	*MB*	27921.573			3588.780	10	*MB*	27856.672	$8280°_{2\,1/2}-36137_{2\,1/2}$	15
3580.565	80	*MB*	27920.583	$1873°_{3\,1/2}-29794_{3\,1/2}$	0	3588.841	10	*MB*	27856.199		
3580.776	50	*PK*	27918.938	$7278°_{1\,1/2}-35197_{1\,1/2}$	20	3588.985	15	*MB*	27855.081	$3703°_{3\,1/2}-31558_{3\,1/2}$	49
3581.398	5	*MB*	27914.089			3589.065	10	*MB*	27854.460		
3581.800	20	*MB*	27910.956	$12762°_{4\,1/2}-40673_{5\,1/2}$	22	3589.166	1	*MB*	27853.676		
3582.124	20	*WA*	27908.432	$6517°_{2\,1/2}-34426_{2\,1/2}$	14	3589.240	1	*MB*	27853.102		
3582.202	10	*MB*	27907.824			3589.393	20	*MB*	27851.915	$5010°_{2\,1/2}-32862_{3\,1/2}$	18
3582.499	15	*WA*	27905.510	$6389°_{4\,1/2}-34295_{4\,1/2}$	3	3589.681	3	*MB*	27849.681	$7011_{4\,1/2}-34861°_{5\,1/2}$	−40
3582.602	30	*MB*	27904.708	$6521°_{1\,1/2}-34426_{2\,1/2}$	3	3589.828	1	*MB*	27848.540		
3582.940	15	*MB*	27902.076	$4511°_{2\,1/2}-32413_{3\,1/2}$	−12	3589.858	5	*MB*	27848.307		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3590.036	5	*MB*	27846.927			3597.035	2	*MB*	27792.745		
3590.153	7	*MB*	27846.019			3597.318	1	*MB*	27790.558		
3590.206	6	*MB*	27845.608	$7713°_{4\,1/2}-35558_{3\,1/2}$	−4	3597.355	10	*MB*	27790.272		
3590.348	30	*MB*	27844.507	$3363°_{2\,1/2}-31207_{3\,1/2}$	7	3597.543	3	*MB*	27788.820		
3590.487	15	*MB*	27843.429	$5964°_{3\,1/2}-33808_{2\,1/2}$	8	3597.640	3	*MB*	27788.071		
3590.598	300	*MT*	27842.568	$5969°_{5\,1/2}-33811_{4\,1/2}$	8	3598.191	140	*MB*	27783.816	$2382°_{4\,1/2}-30166_{3\,1/2}$	5
3590.798	10	*MB*	27841.018	$10820_{2\,1/2}-38661°_{1\,1/2}$	−15					$2641°_{3\,1/2}-30425_{2\,1/2}$	26
3591.129	1	*MB*	27838.451			3598.276	12	*MB*	27783.159	$6549°_{2\,1/2}-34333_{2\,1/2}$	−30
3591.240	3	*MB*	27837.591			3598.478	5	*MB*	27781.600		
3591.336	6	*MB*	27836.847			3598.517	5	*MB*	27781.299	$12057°_{2\,1/2}-39838_{2\,1/2}$	−38
3591.400	5	*MB*	27836.351	$5716°_{3\,1/2}-33552_{2\,1/2}$	−14	3598.635	18	*MB*	27780.388		
3591.467	6	*MB*	27835.832			3598.733	2	*MB*	27779.631		
3591.581	10	*MB*	27834.948			3598.839	7	*MB*	27778.813		
3591.738	7	*MB*	27833.731			3599.153	2	*MB*	27776.390		
3591.818	7	*MB*	27833.111			3599.496	3	*MB*	27773.743		
3592.068	12	*MB*	27831.174	$8280°_{2\,1/2}-36112_{3\,1/2}$	100	3599.726	2	*MB*	27771.968		
3592.309	1	*MB*	27829.307			3599.972	80	*MB*	27770.071	$4737°_{2\,1/2}-32507_{1\,1/2}$	2
3592.456	1	*MB*	27828.168			3600.074	15	*MB*	27769.284	$7092_{5\,1/2}-34861°_{5\,1/2}$	23
3592.492	3	*MB*	27827.890			3600.109	12	*MB*	27769.014		
3592.571	3	*MB*	27827.278			3600.201	6	*MB*	27768.304	$10684°_{0\,1/2}-38452_{1\,1/2}$	−4
3592.755	5	*MB*	27825.853			3600.335	12	*MB*	27767.271	$5283°_{0\,1/2}-33050_{1\,1/2}$	9
3592.883	1	*MB*	27824.861	$11007°_{1\,1/2}-38832_{2\,1/2}$	−48	3600.580	150	*MB*	27765.381	$6389°_{4\,1/2}-34155_{3\,1/2}$	13
3593.134	20	*MB*	27822.918	$2879°_{5\,1/2}-30702_{4\,1/2}$	3	3600.755	10	*MB*	27764.032		
3593.227	18	*MB*	27822.198			3601.289	18	*MB*	27759.915	$10088°_{1\,1/2}-37848_{2\,1/2}$	6
3593.314	1	*MB*	27821.524			3601.504	7	*MB*	27758.258		
3593.492	20	*MB*	27820.146	$11015_{3\,1/2}-38835°_{2\,1/2}$	−8	3601.662	6	*MB*	27757.040		
3593.644	7	*MB*	27818.969			3601.760	20	*MB*	27756.285	$1410°_{4\,1/2}-29166_{4\,1/2}$	−7
3593.726	1	*MB*	27818.335			3601.865	20	*MB*	27755.476		
3594.032	30	*MB*	27815.966	$4322°_{2\,1/2}-32138_{2\,1/2}$	−23	3602.014	20	*MB*	27754.328		
3594.092	30	*MB*	27815.502	$6517°_{2\,1/2}-34333_{2\,1/2}$	23	3602.234	5	*MB*	27752.633	$2382°_{4\,1/2}-30134_{5\,1/2}$	−30
3594.230	3	*MB*	27814.434	$8702°_{1\,1/2}-36516_{1\,1/2}$	80	3602.445	10	*MB*	27751.008		
3594.382	15	*MB*	27813.258			3603.320	7	*MB*	27744.269		
3594.494	20	*MB*	27812.391	$0°_{3\,1/2}-27812_{2\,1/2}$	−6	3603.359	60	*MB*	27743.969	$5118°_{2\,1/2}-32862_{3\,1/2}$	8
3594.574	20	*MB*	27811.772	$6521°_{1\,1/2}-34333_{2\,1/2}$	6	3603.472	20	*MB*	27743.099	$987°_{4\,1/2}-28730_{3\,1/2}$	−1
3594.612	20	*MB*	27811.478	$0°_{3\,1/2}-27811_{3\,1/2}$	−17	3603.749	12	*MB*	27740.966	$9491°_{0\,1/2}-37232_{1\,1/2}$	21
3594.635	20	*MB*	27811.300	$10641°_{2\,1/2}-38452_{1\,1/2}$	−7	3603.871	7	*MB*	27740.027		
3594.763	6	*MB*	27810.310			3604.058	2	*MB*	27738.588		
3594.925	1	*MB*	27809.057	$9269°_{0\,1/2}-37078_{1\,1/2}$	4	3604.122	35	*MB*	27738.095	$4459°_{3\,1/2}-32197_{4\,1/2}$	−14
3595.172	5	*MB*	27807.146	$3363°_{2\,1/2}-31170_{1\,1/2}$	−71	3604.192	140	*MB*	27737.557	$987°_{4\,1/2}-28725_{4\,1/2}$	20
3595.204	10	*MB*	27806.899	$4511°_{2\,1/2}-32318_{3\,1/2}$	−18	3604.267	15	*MB*	27736.980		
3595.414	2	*MB*	27805.275			3604.466	15	*MB*	27735.448		
3595.480	1	*MB*	27804.764			3604.534	18	*MB*	27734.925	$8402°_{3\,1/2}-36137_{2\,1/2}$	−10
3595.547	3	*MB*	27804.246	$13784°_{1\,1/2}-41589_{0\,1/2}$	−54	3604.567	10	*MB*	27734.671		
3596.110	100	*MB*	27799.893	$8402°_{3\,1/2}-36202_{4\,1/2}$	4	3604.638	15	*MB*	27734.125	$5675°_{4\,1/2}-33409_{3\,1/2}$	−8
3596.384	12	*MB*	27797.775			3604.695	20	*MB*	27733.686	$10114°_{2\,1/2}-37848_{2\,1/2}$	20
3596.577	2	*MB*	27796.284			3604.932	20	*WA*	27731.863	$7202°_{2\,1/2}-34934_{2\,1/2}$	−30
3596.632	3	*MB*	27795.858			3605.113	18	*MB*	27730.471	$10798°_{2\,1/2}-38529_{2\,1/2}$	5
3596.727	40	*MB*	27795.124	$4523°_{4\,1/2}-32318_{3\,1/2}$	−17	3605.348	5	*MB*	27728.663		
3596.853	1	*MB*	27794.151			3605.495	1	*MB*	27727.533		
3596.967	1	*MB*	27793.270			3605.606	2	*MB*	27726.679		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3605.770	25	*WA*	27725.418	$9198°_{3\,1/2}-36923_{4\,1/2}$	−44	3614.893	1	*MB*	27655.449	$7278°_{1\,1/2}-34934_{2\,1/2}$	−51
3605.847	3	*MB*	27724.826			3614.979	7	*MB*	27654.791		
3606.271	3	*MB*	27721.567			3615.020	6	*MB*	27654.477	$6389°_{4\,1/2}-34044_{4\,1/2}$	−21
3606.302	18	*MB*	27721.328			3615.061	7	*MB*	27654.164	$10798°_{2\,1/2}-38452_{1\,1/2}$	−30
3606.368	3	*MB*	27720.821			3615.209	3	*MB*	27653.031		
3606.488	6	*MB*	27719.899			3615.343	1	*MB*	27652.007		
3606.906	7	*MB*	27716.686			3615.449	1	*MB*	27651.196		
3606.985	6	*MB*	27716.079			3615.632	50	*MB*	27649.796	$2140°_{0\,1/2}-29790_{0\,1/2}$	19
3607.024	2	*MB*	27715.780	$10088°_{1\,1/2}-37804_{1\,1/2}$	−13	3615.821	3	*MB*	27648.351	$6517°_{2\,1/2}-34166_{1\,1/2}$	−68
3607.620	360	*MB*	27711.201	$5437°_{3\,1/2}-33148_{2\,1/2}$	34	3616.128	25	*MB*	27646.004	$9198°_{3\,1/2}-36844_{2\,1/2}$	25
3607.856	30	*MB*	27709.388	$8402°_{3\,1/2}-36112_{3\,1/2}$	35	3616.199	110	*MB*	27645.461	$5651°_{5\,1/2}-33296_{4\,1/2}$	13
3608.013	12	*MB*	27708.183	$9634°_{1\,1/2}-37342_{2\,1/2}$	42	3616.295	25	*MB*	27644.727	$8280°_{2\,1/2}-35925_{3\,1/2}$	−8
3608.321	7	*MB*	27705.817	$7061°_{0\,1/2}-34767_{1\,1/2}$	−35					$6521°_{1\,1/2}-34166_{1\,1/2}$	21
				$5010°_{2\,1/2}-32716_{2\,1/2}$	41	3616.514	5	*MB*	27643.053		
3608.915	1	*MB*	27701.257			3616.638	10	*MB*	27642.106	$5437°_{3\,1/2}-33079_{3\,1/2}$	16
3608.942	3	*MB*	27701.050			3616.862	7	*MB*	27640.394		
3609.070	1	*MB*	27700.068			3617.024	5	*MB*	27639.156	$7818°_{1\,1/2}-35457_{1\,1/2}$	−14
3609.213	25	*MB*	27698.970			3617.103	12	*MB*	27638.552	$6521°_{1\,1/2}-34159_{0\,1/2}$	7
3609.277	5	*MB*	27698.479			3617.187	1	*MB*	27637.910		
3609.679	500	*MB*	27695.395	$7233°_{5\,1/2}-34928_{4\,1/2}$	53	3617.213	3	*MB*	27637.712	$6517°_{2\,1/2}-34155_{3\,1/2}$	20
				$9198°_{3\,1/2}-36893_{3\,1/2}$	−48						
						3617.310	1	*MB*	27636.971		
3609.898	20	*MB*	27693.714	$5716°_{3\,1/2}-33409_{3\,1/2}$	34	3617.388	5	*MB*	27636.375		
3610.254	25	*MB*	27690.984	$5969°_{5\,1/2}-33659_{5\,1/2}$	23	3617.821	10	*MB*	27633.067		
3610.437	25	*MB*	27689.580	$10114°_{2\,1/2}-37804_{1\,1/2}$	29	3618.140	10	*MB*	27630.631	$13659°_{4\,1/2}-41289_{5\,1/2}$	−10
3610.735	3	*MB*	27687.295			3618.432	25	*MB*	27628.401	$5924°_{1\,1/2}-33552_{2\,1/2}$	23
3610.759	2	*MB*	27687.111			3618.571	150	*MB*	27627.340	$5010°_{2\,1/2}-32638_{1\,1/2}$	45
3610.908	110	*MB*	27685.968	$7341_{5\,1/2}-35026°_{4\,1/2}$	32	3618.950	35	*MB*	27624.447		
3611.145	2	*MB*	27684.151			3619.078	12	*MB*	27623.470		
3611.304	40	*MB*	27682.933	$2382°_{4\,1/2}-30065_{3\,1/2}$	15	3619.248	6	*MB*	27622.172		
3611.337	70	*MB*	27682.680	$2563°_{5\,1/2}-30245_{4\,1/2}$	35	3619.395	10	*MB*	27621.050	$5675°_{4\,1/2}-33296_{4\,1/2}$	9
3611.604	5	*MB*	27680.633			3619.662	15	*MB*	27619.013		
3611.642	15	*WA*	27680.342	$7878°_{3\,1/2}-35558_{3\,1/2}$	−31	3619.812	5	*MB*	27617.868		
3611.723	25	*MB*	27679.721	$3363°_{2\,1/2}-31043_{2\,1/2}$	38	3619.887	7	*MB*	27617.296		
3612.038	10	*MB*	27677.307			3619.924	8	*MT*	27617.014	$10924°_{4\,1/2}-38541_{4\,1/2}$	17
3612.081	1	*MB*	27676.978			3619.944	60	*MB*	27616.862	$2563°_{5\,1/2}-30180_{6\,1/2}$	0
3612.216	3	*MB*	27675.944	$4737°_{2\,1/2}-32413_{3\,1/2}$	−28	3620.041	18	*MB*	27616.121	$6549°_{2\,1/2}-34166_{1\,1/2}$	−9
3612.290	20	*MB*	27675.377	$7522°_{0\,1/2}-35197_{1\,1/2}$	−4	3620.124	25	*MB*	27615.488		
				$7259°_{3\,1/2}-34934_{2\,1/2}$	29	3620.315	35	*MB*	27614.031	$3593°_{4\,1/2}-31207_{3\,1/2}$	−13
3612.341	80	*MB*	27674.986	$4523°_{4\,1/2}-32197_{4\,1/2}$	37	3620.485	1	*MB*	27612.735		
3612.825	18	*MB*	27671.278	$4266°_{3\,1/2}-31937_{3\,1/2}$	23	3620.586	5	*MB*	27611.965	$11325°_{2\,1/2}-38937_{1\,1/2}$	−69
3613.005	3	*MB*	27669.900	$7259°_{3\,1/2}-34928_{4\,1/2}$	6	3620.612	5	*MB*	27611.766	$12260°_{3\,1/2}-39871_{4\,1/2}$	22
3613.484	3	*MB*	27666.232			3620.695	1	*MB*	27611.133		
3613.693	380	*MB*	27664.632	$2581°_{4\,1/2}-30245_{4\,1/2}$	11	3620.749	1	*MB*	27610.721	$7202°_{2\,1/2}-34813_{2\,1/2}$	49
3613.857	5	*MB*	27663.377			3620.962	7	*MB*	27609.097	$20940_{3\,1/2}-48549°_{4\,1/2}$	−53
3614.013	30	*MB*	27662.183	$3508°_{0\,1/2}-31170_{1\,1/2}$	8	3621.149	40	*MB*	27607.672	$5437°_{3\,1/2}-33045_{2\,1/2}$	0
3614.123	10	*MB*	27661.341			3621.250	5	*MB*	27606.902		
3614.354	10	*MB*	27659.573			3621.322	2	*MB*	27606.353		
3614.440	2	*MB*	27658.915			3621.449	5	*MB*	27605.385	$6549°_{2\,1/2}-34155_{3\,1/2}$	−17
3614.613	1	*MB*	27657.591			3621.561	7	*MB*	27604.531		
3614.666	3	*MB*	27657.185	$6638°_{4\,1/2}-34295_{4\,1/2}$	−6	3621.587	10	*MB*	27604.333	$2641°_{3\,1/2}-30245_{4\,1/2}$	14

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3621.712	10	*MB*	27603.380			3631.471	7	*MB*	27529.202		
3621.845	10	*MB*	27602.367	$15565°_{2\,1/2}-43167_{1\,1/2}$	−90	3631.492	2	*MB*	27529.043		
3622.143	400	*MB*	27600.096	$6913°_{6\,1/2}-34513_{6\,1/2}$	20	3631.750	6	*MB*	27527.088	$10088°_{1\,1/2}-37615_{0\,1/2}$	−5
3622.404	60	*MB*	27598.107	$3363°_{2\,1/2}-30961_{1\,1/2}$	16	3631.812	5	*MB*	27526.618	$5513_{5\,1/2}-33040°_{4\,1/2}$	−25
3622.439	8	*MT*	27597.841	$5118°_{2\,1/2}-32716_{2\,1/2}$	0					$2382°_{4\,1/2}-29908_{4\,1/2}$	−39
3622.536	2	*MB*	27597.102			3632.006	1	*MB*	27525.147		
3622.813	6	*MB*	27594.991			3632.096	140	*MB*	27524.465	$2641°_{3\,1/2}-30166_{3\,1/2}$	−32
3623.149	1	*MB*	27592.432			3632.136	8	*MB*	27524.162	$3508°_{0\,1/2}-31032_{0\,1/2}$	22
3623.351	6	*MB*	27590.894			3632.289	20	*MB*	27523.003	$8402°_{3\,1/2}-35925_{3\,1/2}$	−10
3623.738	350	*MB*	27587.948	$14404°_{7\,1/2}-41992_{6\,1/2}$	−7	3632.529	5	*MB*	27521.185	$11007°_{1\,1/2}-38529_{2\,1/2}$	−36
3623.832	400	*MB*	27587.232	$6389°_{4\,1/2}-33977_{3\,1/2}$	34	3632.620	7	*MB*	27520.495	$7341_{5\,1/2}-34861°_{5\,1/2}$	−23
3624.147	120	*MB*	27584.834	$2581°_{4\,1/2}-30166_{3\,1/2}$	35	3632.775	10	*MB*	27519.321	$5118°_{2\,1/2}-32638_{1\,1/2}$	−37
3624.456	12	*MB*	27582.483			3632.946	4	*MB*	27518.026		
3624.589	6	*MB*	27581.471			3633.078	5	*MB*	27517.026	$6638°_{4\,1/2}-34155_{3\,1/2}$	−26
3624.647	5	*MB*	27581.029	$4910°_{5\,1/2}-32492_{5\,1/2}$	−45	3633.240	3	*MB*	27515.799		
3624.676	2	*WA*	27580.809	$4737°_{2\,1/2}-32318_{3\,1/2}$	7	3633.297	2	*MB*	27515.367		
3624.702	3	*MB*	27580.611	$5716°_{3\,1/2}-33296_{4\,1/2}$	22	3633.397	40	*MB*	27514.610	$0°_{3\,1/2}-27514_{3\,1/2}$	−49
3624.798	10	*MB*	27579.880			3633.485	4	*MB*	27513.944		
3624.871	2	*MB*	27579.325			3633.941	6	*MB*	27510.491		
3624.893	7	*MB*	27579.158			3634.035	1	*MB*	27509.780		
3625.004	7	*MB*	27578.313	$12260°_{3\,1/2}-39838_{2\,1/2}$	−43	3634.153	7	*MB*	27508.886		
3625.133	12	*MB*	27577.332	$5283°_{0\,1/2}-32860_{0\,1/2}$	8	3634.183	2	*MB*	27508.659		
3625.194	2	*MB*	27576.868			3634.220	2	*MB*	27508.379		
3625.761	7	*MB*	27572.555	$3995°_{3\,1/2}-31568_{4\,1/2}$	−3	3634.415	7	*MB*	27506.903	$11325°_{2\,1/2}-38832_{2\,1/2}$	−24
3625.848	2	*MB*	27571.894			3634.635	2	*MB*	27505.239		
3626.443	3	*MB*	27567.370	$13515°_{3\,1/2}-41083_{4\,1/2}$	−70	3634.738	5	*MB*	27504.459		
3626.640	6	*MB*	27565.873			3635.416	4	*MB*	27499.330		
3626.724	7	*MB*	27565.234	$7202°_{2\,1/2}-34767_{1\,1/2}$	73	3635.509	5	*MB*	27498.626		
3626.860	7	*MB*	27564.201	$4201°_{1\,1/2}-31766_{1\,1/2}$	−14	3635.629	1	*MB*	27497.719		
3626.958	10	*MB*	27563.456	$10088°_{1\,1/2}-37652_{2\,1/2}$	5	3635.786	8	*MB*	27496.531	$5010°_{2\,1/2}-32507_{1\,1/2}$	−40
3626.998	12	*MB*	27563.152	$3995°_{3\,1/2}-31558_{3\,1/2}$	−13	3635.880	8	*MB*	27495.820	$3593°_{4\,1/2}-31089_{5\,1/2}$	−28
3627.341	7	*MB*	27560.546			3636.067	20	*MB*	27494.406	$5616_{4\,1/2}-33111°_{3\,1/2}$	−17
3627.850	1	*MB*	27556.679			3636.373	20	*MB*	27492.093	$11340°_{3\,1/2}-38832_{2\,1/2}$	−17
3628.190	15	*MB*	27554.097	$7259°_{3\,1/2}-34813_{2\,1/2}$	−29	3636.463	6	*MB*	27491.412	$10703_{4\,1/2}-38194°_{4\,1/2}$	−10
3628.248	80	*MB*	27553.656	$2581°_{4\,1/2}-30134_{5\,1/2}$	3	3636.553	4	*MB*	27490.732	$1873°_{3\,1/2}-29364_{3\,1/2}$	−73
3628.493	10	*MB*	27551.796	$14481°_{2\,1/2}-42033_{2\,1/2}$	71	3636.583	7	*MB*	27490.505	$20554_{5\,1/2}-48045°_{6\,1/2}$	2
3628.823	5	*MB*	27549.290			3636.733	6	*MB*	27489.372	$3745°_{1\,1/2}-31234_{2\,1/2}$	−31
3628.915	2	*MB*	27548.592	$10646_{5\,1/2}-38194°_{4\,1/2}$	−65	3637.180	1	*MB*	27485.993		
3629.001	1	*MB*	27547.939			3637.463	10	*MB*	27483.855	$2581°_{4\,1/2}-30065_{3\,1/2}$	−51
3629.623	5	*MB*	27543.218			3637.747	80	*MB*	27481.709	$3593°_{4\,1/2}-31075_{4\,1/2}$	−11
3630.026	5	*MB*	27540.161			3638.044	20	*MB*	27479.466	$7746°_{2\,1/2}-35225_{2\,1/2}$	−4
3630.228	2	*MB*	27538.628			3638.201	2	*MB*	27478.280		
3630.317	2	*MB*	27537.953			3638.280	120	*MB*	27477.683	$5819°_{4\,1/2}-33296_{4\,1/2}$	−8
3630.419	50	*MB*	27537.180	$10114°_{2\,1/2}-37652_{2\,1/2}$	−27	3638.506	2	*MB*	27475.977		
3630.515	1	*MB*	27536.451			3638.965	3	*MB*	27472.511		
3630.773	8	*MB*	27534.495	$4203°_{6\,1/2}-31738_{5\,1/2}$	−54	3639.032	1	*MB*	27472.005		
3630.806	8	*MB*	27534.245	$7278°_{1\,1/2}-34813_{2\,1/2}$	−34	3639.173	8	*MB*	27470.941		
3630.920	3	*MB*	27533.380			3639.324	10	*MB*	27469.801	$4844°_{1\,1/2}-32314_{0\,1/2}$	−23
3630.983	2	*MB*	27532.902			3639.452	10	*MB*	27468.835	$11340°_{3\,1/2}-38809_{3\,1/2}$	−42
3631.191	180	*MB*	27531.325	$3703°_{3\,1/2}-31234_{2\,1/2}$	40	3639.569	15	*MB*	27467.952	$7878°_{3\,1/2}-35346_{3\,1/2}$	−1

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3639.685	6	*MB*	27467.077	$5942°_{3\,1/2}-33409_{3\,1/2}$	−21					$8402°_{3\,1/2}-35807_{4\,1/2}$	23
3639.872	8	*MB*	27465.665	$3363°_{2\,1/2}-30829_{3\,1/2}$	−31	3648.098	12	*MB*	27403.735	$5675°_{4\,1/2}-33079_{3\,1/2}$	−13
3639.905	3	*MB*	27465.417			3648.146	1	*MB*	27403.375		
3640.330	1	*MB*	27462.210			3648.272	6	*MB*	27402.429	$5010°_{2\,1/2}-32413_{3\,1/2}$	−46
3640.427	1	*MB*	27461.478			3648.603	10	*MB*	27399.943		
3640.694	40	*MB*	27459.464	$6517°_{2\,1/2}-33977_{3\,1/2}$	−56	3648.695	2	*MB*	27399.252		
3640.802	2	*MB*	27458.650			3648.778	1	*MB*	27398.629		
3641.549	15	*MB*	27453.017	$3508°_{0\,1/2}-30961_{1\,1/2}$	−30	3648.815	10	*MB*	27398.351	$8804°_{4\,1/2}-36202_{4\,1/2}$	18
3641.645	5	*MB*	27452.294			3648.890	9	*MB*	27397.788		
3641.730	15	*MB*	27451.653	$7746°_{2\,1/2}-35197_{1\,1/2}$	−1	3649.183	4	*MB*	27395.588		
3641.840	2	*MB*	27450.824			3649.516	2	*MB*	27393.088		
3641.964	1	*MB*	27449.889			3649.731	40	*MB*	27391.474	$4459°_{3\,1/2}-31851_{2\,1/2}$	−50
3642.245	10	*MB*	27447.772	$15281_{6\,1/2}-42729°_{5\,1/2}$	−72	3649.829	2	*MB*	27390.739		
3642.655	8	*MB*	27444.682	$9634°_{1\,1/2}-37078_{1\,1/2}$	−10	3649.913	1	*MB*	27390.109		
3642.829	50	*MB*	27443.371	$4322°_{2\,1/2}-31766_{1\,1/2}$	−29	3649.944	1	*MB*	27389.876	$20940_{3\,1/2}-48330°_{3\,1/2}$	−74
3642.933	1	*MB*	27442.588			3650.022	2	*MB*	27389.291		
3643.016	8	*MB*	27441.963	$10088°_{1\,1/2}-37530_{1\,1/2}$	−29	3650.115	7	*MB*	27388.593	$5118°_{2\,1/2}-32507_{1\,1/2}$	−42
3643.067	1	*MB*	27441.578			3650.141	80	*MB*	27388.398	$2595°_{1\,1/2}-29984_{1\,1/2}$	−9
3643.123	2	*MB*	27441.157			3650.195	8	*MB*	27387.993		
3643.199	2	*MB*	27440.584			3650.262	6	*MB*	27387.490		
3643.338	3	*MB*	27439.537			3650.880	160	*MB*	27382.854	$8175°_{2\,1/2}-35558_{3\,1/2}$	15
3643.583	2	*MB*	27437.692			3651.014	7	*MB*	27381.849	$3363°_{2\,1/2}-30745_{1\,1/2}$	−9
3643.885	4	*MB*	27435.418			3651.318	12	*MB*	27379.569		
3643.921	4	*MB*	27435.147	$8702°_{1\,1/2}-36137_{2\,1/2}$	−12	3651.646	15	*MB*	27377.110	$10274°_{3\,1/2}-37652_{2\,1/2}$	−9
3644.299	40	*MB*	27432.302	$14315°_{0\,1/2}-41748_{1\,1/2}$	−44	3651.690	5	*MB*	27376.780		
3644.348	4	*MB*	27431.933			3652.111	120	*MB*	27373.624	$3995°_{3\,1/2}-31369_{2\,1/2}$	−8
3644.412	7	*MB*	27431.451			3652.266	60	*MB*	27372.463	$5616_{4\,1/2}-32989°_{3\,1/2}$	−15
3644.443	3	*MB*	27431.218	$15281_{6\,1/2}-42712°_{6\,1/2}$	10	3652.326	10	*MB*	27372.013	$12466°_{1\,1/2}-39838_{2\,1/2}$	−1
3644.542	10	*MB*	27430.473	$2634°_{2\,1/2}-30065_{3\,1/2}$	−24					$3703°_{3\,1/2}-31075_{4\,1/2}$	4
3644.974	8	*MB*	27427.222	$6549°_{2\,1/2}-33977_{3\,1/2}$	−9	3652.481	7	*MB*	27370.852		
3645.090	8	*MB*	27426.349	$4511°_{2\,1/2}-31937_{3\,1/2}$	−46	3652.675	2	*MB*	27369.398		
3645.228	120	*MB*	27425.311	$5437°_{3\,1/2}-32862_{3\,1/2}$	−33	3652.789	3	*MB*	27368.544		
3645.293	10	*MB*	27424.822	$2382°_{4\,1/2}-29807_{3\,1/2}$	−9	3652.896	3	*MB*	27367.742		
3645.426	8	*MB*	27423.821			3652.918	4	*MB*	27367.577		
3645.457	120	*MB*	27423.588	$5616_{4\,1/2}-33040°_{4\,1/2}$	−25	3653.021	3	*MB*	27366.806		
				$2641°_{3\,1/2}-30065_{3\,1/2}$	−16						
						3653.102	380	*MB*	27366.199	$2879°_{5\,1/2}-30245_{4\,1/2}$	16
3645.705	10	*MB*	27421.722	$11387°_{3\,1/2}-38809_{3\,1/2}$	−22	3653.194	2	*MB*	27365.510		
3645.863	6	*MB*	27420.534			3653.419	4	*MB*	27363.825		
3646.210	4	*MB*	27417.925			3653.664	600	*MB*	27361.990	$3793°_{6\,1/2}-31155_{6\,1/2}$	1
3646.445	4	*MB*	27416.158			3654.015	4	*MB*	27359.361	$2634°_{2\,1/2}-29994_{2\,1/2}$	−13
3646.506	2	*MB*	27415.699	$10114°_{2\,1/2}-37530_{1\,1/2}$	−50	3654.097	10	*MB*	27358.747	$6517°_{2\,1/2}-33876_{1\,1/2}$	−10
3646.651	140	*MB*	27414.609	$4523°_{4\,1/2}-31937_{3\,1/2}$	−10	3654.202	10	*MB*	27357.961	$13117_{4\,1/2}-40475°_{3\,1/2}$	−41
3646.961	320	*MB*	27412.279	$2382°_{4\,1/2}-29794_{3\,1/2}$	8	3654.322	2	*MB*	27357.063		
3647.224	7	*MB*	27410.302			3654.424	3	*MB*	27356.299		
3647.261	3	*MB*	27410.024			3654.458	3	*MB*	27356.045		
3647.541	10	*MB*	27407.920	$4523°_{4\,1/2}-31930_{4\,1/2}$	17	3654.585	10	*MB*	27355.094	$6521°_{1\,1/2}-33876_{1\,1/2}$	49
3647.597	15	*MB*	27407.499	$7818°_{1\,1/2}-35225_{2\,1/2}$	−9					$5283°_{0\,1/2}-32638_{1\,1/2}$	−41
3647.754	240	*MB*	27406.320	$7522°_{5\,1/2}-34928_{4\,1/2}$	−27	3654.630	2	*MB*	27354.758		
3647.856	9	*MB*	27405.553			3654.734	4	*MB*	27353.979	$5942°_{3\,1/2}-33296_{4\,1/2}$	−27
3647.940	240	*MB*	27404.922	$17232_{7\,1/2}-44637°_{6\,1/2}$	27	3654.936	280	*MB*	27352.467	$2641°_{3\,1/2}-29994_{2\,1/2}$	−14

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3655.092	3	*MB*	27351.300			3661.620	10	*MB*	27302.539		
3655.348	10	*MB*	27349.384	$2634°_{2\,1/2}-29984_{1\,1/2}$	−1	3661.746	120	*MB*	27301.599	$4266°_{3\,1/2}-31568_{4\,1/2}$	−22
3655.653	9	*MB*	27347.103	$987°_{4\,1/2}-28334_{4\,1/2}$	−41	3661.833	3	*MB*	27300.951	$16159°_{3\,1/2}-43460_{2\,1/2}$	−45
3655.843	1600	*MB*	27345.681	$2563°_{5\,1/2}-29908_{4\,1/2}$	11	3661.911	10	*MB*	27300.369	$2879°_{5\,1/2}-30180_{6\,1/2}$	−31
3656.030	3	*MB*	27344.283			3662.197	6	*MB*	27298.237		
3656.071	1	*MB*	27343.976			3662.242	1	*MB*	27297.902	$15235_{1\,1/2}-42533°_{1\,1/2}$	22
3656.291	10	*MB*	27342.331	$13515°_{3\,1/2}-40858_{4\,1/2}$	−20	3662.283	7	*MB*	27297.596	$3745°_{1\,1/2}-31043_{2\,1/2}$	−38
3656.421	2	*MB*	27341.359			3662.417	3	*MB*	27296.597		
3656.591	10	*MB*	27340.088	$4511°_{2\,1/2}-31851_{2\,1/2}$	−51	3662.489	12	*MB*	27296.061	$3793°_{6\,1/2}-31089_{5\,1/2}$	−35
3656.754	20	*MB*	27338.869	$6638°_{4\,1/2}-33977_{3\,1/2}$	−12	3662.761	6	*MB*	27294.034	$4844°_{1\,1/2}-32138_{2\,1/2}$	−19
3656.884	3	*MB*	27337.897	$12057°_{2\,1/2}-39394_{3\,1/2}$	12	3663.006	90	*MB*	27292.208	$4266°_{3\,1/2}-31558_{3\,1/2}$	−20
3656.958	10	*MB*	27337.344			3663.204	7	*MB*	27290.733	$6517°_{2\,1/2}-33808_{2\,1/2}$	36
3657.046	5	*MB*	27336.686			3663.292	3	*MB*	27290.078		
3657.093	1	*MB*	27336.335			3663.421	7	*MB*	27289.117		
3657.239	2	*MB*	27335.244			3663.640	12	*MB*	27287.486		
3657.370	10	*MB*	27334.265			3663.706	80	*MB*	27286.994	$6521°_{1\,1/2}-33808_{2\,1/2}$	9
3657.502	1	*MB*	27333.278							$4910°_{5\,1/2}-32197_{4\,1/2}$	−24
3657.642	6	*MB*	27332.232	$10641°_{2\,1/2}-37973_{3\,1/2}$	−96	3663.802	6	*MB*	27286.279		
3657.692	10	*MB*	27331.858	$5964°_{3\,1/2}-33296_{4\,1/2}$	−50	3664.066	3	*MB*	27284.313		
3657.757	2	*MB*	27331.373			3664.199	6	*MB*	27283.323	$13436_{2\,1/2}-40720°_{1\,1/2}$	59
3657.848	1	*MB*	27330.693			3664.456	8	*MB*	27281.409	$8175°_{2\,1/2}-35457_{1\,1/2}$	−45
3657.908	5	*MB*	27330.244			3664.755	50	*MB*	27279.184	$5437°_{3\,1/2}-32716_{2\,1/2}$	−40
3658.053	10	*MB*	27329.161			3664.950	10	*MB*	27277.732	$8280°_{2\,1/2}-35558_{3\,1/2}$	−23
3658.094	10	*MB*	27328.855	$5716°_{3\,1/2}-33045_{2\,1/2}$	−23	3665.001	15	*MB*	27277.353		
3658.233	5	*MB*	27327.816	$5969°_{5\,1/2}-33296_{4\,1/2}$	19	3665.054	70	*MB*	27276.958	$3854_{3\,1/2}-31130°_{3\,1/2}$	−12
3658.259	40	*MB*	27327.622	$2581°_{4\,1/2}-29908_{4\,1/2}$	−24	3665.317	2	*MB*	27275.001	$8927°_{5\,1/2}-36202_{4\,1/2}$	−41
3658.413	6	*MB*	27326.472	$6549°_{2\,1/2}-33876_{1\,1/2}$	3	3665.358	4	*MB*	27274.696		
3658.663	1	*MB*	27324.605			3665.441	4	*MB*	27274.078		
3658.764	5	*MB*	27323.850			3665.494	8	*MB*	27273.684	$3363°_{2\,1/2}-30637_{2\,1/2}$	−45
3658.850	3	*MB*	27323.208			3665.816	2	*MB*	27271.288		
3658.903	1	*MB*	27322.812			3666.112	4	*MB*	27269.087		
3659.074	9	*MB*	27321.536			3666.170	2	*MB*	27268.655		
3659.226	400	*MB*	27320.401	$1410°_{4\,1/2}-28730_{3\,1/2}$	−6	3666.264	2	*MB*	27267.956		
3659.303	3	*MB*	27319.826	$11759_{5\,1/2}-39079°_{5\,1/2}$	−4	3666.346	15	*MB*	27267.346	$2641°_{3\,1/2}-29908_{4\,1/2}$	1
3659.334	3	*MB*	27319.594			3666.501	5	*MB*	27266.194		
3659.733	1	*MB*	27316.616			3666.722	6	*MB*	27264.550		
3659.809	1	*MB*	27316.049			3666.803	1	*MB*	27263.948		
3659.891	4	*MB*	27315.437			3666.893	3	*MB*	27263.279		
3659.972	320	*MB*	27314.832	$1410°_{4\,1/2}-28725_{4\,1/2}$	−11	3666.951	2	*MB*	27262.848		
3660.089	5	*MB*	27313.959			3666.985	4	*MB*	27262.595		
3660.151	160	*MB*	27313.497	$10274°_{3\,1/2}-37588_{3\,1/2}$	−4	3667.045	2	*MB*	27262.149	$11007°_{1\,1/2}-38269_{0\,1/2}$	−25
3660.393	12	*MB*	27311.691			3667.285	80	*MB*	27260.365	$5819°_{4\,1/2}-33079_{3\,1/2}$	−33
3660.506	2	*MB*	27310.848			3667.328	1	*MB*	27260.045		
3660.559	4	*MB*	27310.452			3667.549	10	*MB*	27258.402	$6549°_{2\,1/2}-33808_{2\,1/2}$	−6
3660.639	800	*MB*	27309.855	$987°_{4\,1/2}-28297_{3\,1/2}$	−6	3667.609	2	*MB*	27257.957	$13217_{3\,1/2}-40475°_{3\,1/2}$	8
3660.895	1	*MB*	27307.946			3667.773	2	*MB*	27256.738		
3660.916	6	*MB*	27307.789	$8804°_{4\,1/2}-36112_{3\,1/2}$	−7	3667.976	800	*MB*	27255.229	$2879°_{5\,1/2}-30134_{5\,1/2}$	15
3661.031	3	*MB*	27306.931			3668.070	2	*MB*	27254.531		
3661.112	4	*MB*	27306.327			3668.140	4	*MB*	27254.011		
3661.400	3	*MB*	27304.179			3668.188	2	*MB*	27253.654	$10088°_{1\,1/2}-37342_{2\,1/2}$	−32

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3668.280	7	*MB*	27252.971	$5924°_{1\,1/2}-33177_{0\,1/2}$	−20	3675.142	5	*MB*	27202.087		
3668.382	3	*MB*	27252.213			3675.262	5	*MB*	27201.199	$11340°_{3\,1/2}-38541_{4\,1/2}$	−75
3668.451	4	*MB*	27251.700			3675.364	15	*MB*	27200.444	$9723°_{4\,1/2}-36923_{4\,1/2}$	−9
3668.566	3	*MB*	27250.846			3675.507	10	*MB*	27199.386	$5118°_{2\,1/2}-32318_{3\,1/2}$	17
3668.728	140	*MB*	27249.643	$0°_{3\,1/2}-27249_{2\,1/2}$	−25	3675.578	12	*MB*	27198.860	$13659°_{4\,1/2}-40858_{4\,1/2}$	−15
3668.900	3	*MB*	27248.365			3675.724	10	*MB*	27197.780	$10454°_{1\,1/2}-37652_{2\,1/2}$	−38
3669.089	10	*MB*	27246.962	$9269°_{0\,1/2}-36516_{1\,1/2}$	−9	3676.155	80	*MB*	27194.591	$2595°_{1\,1/2}-29790_{0\,1/2}$	−34
3669.222	3	*MB*	27245.974			3676.380	3	*MB*	27192.927		
3669.301	3	*MB*	27245.388			3676.434	1	*MB*	27192.527		
3669.489	1	*MB*	27243.992			3676.496	1	*MB*	27192.069		
3670.054	5	*MB*	27239.798			3676.547	2	*MB*	27191.692		
3670.112	5	*MB*	27239.367	$3995°_{3\,1/2}-31234_{2\,1/2}$	−51	3676.695	4	*MB*	27190.597		
3670.266	2	*MB*	27238.224			3676.720	2	*MB*	27190.412		
3670.470	9	*MB*	27236.711			3676.788	1	*MB*	27189.909		
3670.520	80	*MB*	27236.339	$7059°_{4\,1/2}-34295_{4\,1/2}$	−38	3676.997	9	*MB*	27188.364	$11340°_{3\,1/2}-38529_{2\,1/2}$	−58
3670.579	8	*MB*	27235.902	$4322°_{2\,1/2}-31558_{3\,1/2}$	−15	3677.180	10	*MB*	27187.011	$5675°_{4\,1/2}-32862_{3\,1/2}$	7
3670.671	10	*MB*	27235.219	$3593°_{4\,1/2}-30829_{3\,1/2}$	−22					$0°_{3\,1/2}-27187_{3\,1/2}$	−35
3670.861	10	*MB*	27233.809			3677.372	1	*MB*	27185.592		
3671.071	5	*MB*	27232.252			3677.635	4	*MB*	27183.648	$5964°_{3\,1/2}-33148_{2\,1/2}$	−44
3671.157	1	*MB*	27231.614			3677.746	5	*MB*	27182.827		
3671.422	1	*MB*	27229.648			3677.902	7	*MB*	27181.675		
3671.545	6	*MB*	27228.736			3677.926	40	*MB*	27181.497		
3671.942	120	*MB*	27225.792	$2581°_{4\,1/2}-29807_{3\,1/2}$	−28	3678.029	7	*MB*	27180.736		
3672.166	200	*MT*	27224.131	$1410°_{4\,1/2}-28634_{5\,1/2}$	−80	3678.050	7	*MB*	27180.580		
3672.252	10	*MB*	27223.494	$7202°_{2\,1/2}-34426_{2\,1/2}$	−13	3678.232	10	*MB*	27179.236	$4165_{4\,1/2}\ -31344°_{3\,1/2}$	−41
3672.302	2	*MB*	27223.123			3678.274	1	*MB*	27178.925		
3672.523	1	*MB*	27221.485			3678.348	10	*MB*	27178.378		
3672.788	320	*MB*	27219.521	$7293°_{6\,1/2}-34513_{6\,1/2}$	−8	3678.483	3	*MB*	27177.381		
3672.925	6	*MB*	27218.506			3678.640	2	*MB*	27176.221		
3673.046	3	*MB*	27217.609			3678.784	6	*MB*	27175.158	$10798°_{2\,1/2}-37973_{3\,1/2}$	−62
3673.107	1	*MB*	27217.157			3678.859	20	*MB*	27174.603	$7746°_{2\,1/2}-34920_{3\,1/2}$	1
3673.181	2	*MB*	27216.609	$13503_{0\,1/2}\ -40720°_{1\,1/2}$	−4	3678.972	3	*MB*	27173.769		
3673.259	12	*MB*	27216.031	$19481_{4\,1/2}\ -46697°_{4\,1/2}$	−12	3679.043	8	*MB*	27173.245	$6638°_{4\,1/2}-33811_{4\,1/2}$	−63
				$3745°_{1\,1/2}-30961_{1\,1/2}$	−11	3679.154	80	*MB*	27172.425	$2634°_{2\,1/2}-29807_{3\,1/2}$	13
3673.553	3	*MB*	27213.853			3679.425	200	*MB*	27170.423	$8175°_{2\,1/2}-35346_{3\,1/2}$	5
3673.636	160	*MB*	27213.238	$2581°_{4\,1/2}-29794_{3\,1/2}$	−21	3679.544	4	*MB*	27169.545		
3673.690	3	*MB*	27212.838	$10924°_{4\,1/2}-38137_{5\,1/2}$	32	3679.713	8	*MB*	27168.297		
3673.741	12	*MB*	27212.460	$3995°_{3\,1/2}-31207_{3\,1/2}$	−6	3679.899	10	*MB*	27166.924	$7259°_{3\,1/2}-34426_{2\,1/2}$	−37
3673.793	8	*MB*	27212.075			3680.092	160	*MB*	27165.499	$2641°_{3\,1/2}-29807_{3\,1/2}$	−19
3673.902	1	*MB*	27211.268			3680.438	10	*MB*	27162.945	$10641°_{2\,1/2}-37804_{1\,1/2}$	−46
3674.060	40	*MB*	27210.098	$9634°_{1\,1/2}-36844_{2\,1/2}$	−20	3680.546	1	*MB*	27162.148		
3674.137	40	*MB*	27209.527	$10924°_{4\,1/2}-38134_{4\,1/2}$	4	3680.649	10	*MB*	27161.388	$10454°_{1\,1/2}-37615_{0\,1/2}$	−73
3674.390	5	*MB*	27207.654	$7713°_{4\,1/2}-34920_{3\,1/2}$	−44	3680.785	8	*MB*	27160.385	$10035°_{5\,1/2}-37196_{4\,1/2}$	−42
3674.468	12	*MB*	27207.076	$10641°_{2\,1/2}-37848_{2\,1/2}$	−31	3680.861	40	*MB*	27159.824	$2634°_{2\,1/2}-29794_{3\,1/2}$	−26
3674.653	6	*MB*	27205.707	$5942°_{3\,1/2}-33148_{2\,1/2}$	−83	3681.106	15	*MB*	27158.016		
3674.720	9	*MB*	27205.211			3681.183	2	*MB*	27157.448		
3674.754	1	*MB*	27204.959	$18393_{3\,1/2}\ -45598°_{3\,1/2}$	−14	3681.376	160	*MB*	27156.024	$8402°_{3\,1/2}-35558_{3\,1/2}$	−9
3674.856	4	*MB*	27204.204			3681.638	9	*MB*	27154.092	$17976_{2\,1/2}\ -45130°_{2\,1/2}$	−23
3674.897	4	*MB*	27203.900							$11387°_{3\,1/2}-38541_{4\,1/2}$	−49
3674.989	9	*MB*	27203.219	$11325°_{2\,1/2}-38529_{2\,1/2}$	−20	3681.800	7	*MB*	27152.897	$2641°_{3\,1/2}-29794_{3\,1/2}$	−60

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3681.886	5	*MB*	27152.263			3688.030	7	*MB*	27107.030	$19481_{4\,1/2} - 46588°_{5\,1/2}$	−60
3682.079	160	*MB*	27150.840	$5651°_{5\,1/2} - 32802_{5\,1/2}$	32	3688.116	4	*MB*	27106.398		
3682.178	2	*MB*	27150.110			3688.292	9	*MB*	27105.105		
3682.241	7	*MB*	27149.645			3688.426	7	*MB*	27104.120	$7061°_{0\,1/2} - 34166_{1\,1/2}$	−80
3682.296	1	*MB*	27149.240			3688.674	60	*MB*	27102.298	$5513_{5\,1/2} - 32616°_{4\,1/2}$	−11
										$5942°_{3\,1/2} - 33045_{2\,1/2}$	1
3682.489	8	*MB*	27147.817								
3682.495	3	*MB*	27147.773			3688.762	6	*MB*	27101.651		
3682.518	7	*MB*	27147.604			3688.806	3	*MB*	27101.328		
3682.589	2	*MB*	27147.080	$7278°_{1\,1/2} - 34426_{2\,1/2}$	−34	3688.935	1	*MB*	27100.380		
3682.662	10	*MB*	27146.542	$5716°_{3\,1/2} - 32862_{3\,1/2}$	−8	3688.978	2	*MB*	27100.065		
3682.799	1	*MB*	27145.532			3689.100	3	*MB*	27099.168		
3682.845	1	*MB*	27145.193			3689.161	40	*MB*	27098.720	$4459°_{3\,1/2} - 31558_{3\,1/2}$	−33
3682.888	2	*MB*	27144.876			3689.255	6	*MB*	27098.030	$7061°_{0\,1/2} - 34159_{0\,1/2}$	−8
3683.089	10	*MB*	27143.394			3689.354	2	*MB*	27097.303		
3683.380	10	*MB*	27141.250	$11387°_{3\,1/2} - 38529_{2\,1/2}$	−39	3689.504	10	*MB*	27096.201	$7059°_{4\,1/2} - 34155_{3\,1/2}$	−37
3683.468	10	*MB*	27140.602			3689.783	2	*MB*	27094.152		
3683.565	1	*MB*	27139.887			3690.380	3	*MB*	27089.769		
3683.583	1	*MB*	27139.754			3690.494	6	*MB*	27088.932		
3683.815	9	*MB*	27138.045			3690.629	7	*MB*	27087.942		
3684.003	4	*MB*	27136.660	$5942°_{3\,1/2} - 33079_{3\,1/2}$	−53	3691.066	8	*MB*	27084.735		
3684.128	10	*MB*	27135.740	$15593_{6\,1/2} - 42729°_{5\,1/2}$	−46	3691.138	1	*MB*	27084.206		
3684.242	12	*MB*	27134.900	$12260°_{3\,1/2} - 39394_{3\,1/2}$	−4	3691.880	7	*MB*	27078.763		
3684.352	2	*MB*	27134.090			3691.922	2	*MB*	27078.455		
3684.516	1	*MB*	27132.882			3691.954	3	*MB*	27078.220	$2595°_{1\,1/2} - 29673_{2\,1/2}$	94
3684.725	10	*MB*	27131.343			3692.068	10	*MB*	27077.384		
3684.774	6	*MB*	27130.982			3692.213	10	*MB*	27076.321	$10454°_{1\,1/2} - 37530_{1\,1/2}$	−39
3684.834	8	*MB*	27130.541	$7202°_{2\,1/2} - 34333_{2\,1/2}$	−27	3692.406	3	*MB*	27074.906		
3684.879	2	*MB*	27130.209			3692.560	10	*MB*	27073.777		
3684.987	12	*MB*	27129.414			3692.677	1	*MB*	27072.919		
3685.204	10	*MB*	27127.817	$5010°_{2\,1/2} - 32138_{2\,1/2}$	−10	3692.991	2	*MB*	27070.617		
3685.315	2	*MB*	27127.000	$11325°_{2\,1/2} - 38452_{1\,1/2}$	31	3693.272	2	*MB*	27068.557		
3685.402	6	*MB*	27126.359	$5675°_{4\,1/2} - 32802_{5\,1/2}$	−42	3693.441	80	*MB*	27067.319	$10274°_{3\,1/2} - 37342_{2\,1/2}$	−36
3685.518	10	*MB*	27125.506	$3703°_{3\,1/2} - 30829_{3\,1/2}$	−23	3693.481	2	*MB*	27067.026	$7746°_{2\,1/2} - 34813_{2\,1/2}$	9
3685.763	1	*MB*	27123.703			3693.535	2	*MB*	27066.630		
3685.874	1	*MB*	27122.886			3693.614	4	*MB*	27066.051		
3686.116	5	*MB*	27121.105			3693.714	40	*MB*	27065.318	$9778°_{2\,1/2} - 36844_{2\,1/2}$	0
3686.266	12	*MB*	27120.002	$10684°_{0\,1/2} - 37804_{1\,1/2}$	9					$8280°_{2\,1/2} - 35346_{3\,1/2}$	−17
3686.401	9	*MB*	27119.009			3693.917	7	*MB*	27063.831		
3686.599	7	*MB*	27117.552	$10114°_{2\,1/2} - 37232_{1\,1/2}$	−2	3694.002	6	*MB*	27063.208		
3686.649	4	*MB*	27117.184			3694.184	8	*MB*	27061.875	$7233°_{5\,1/2} - 34295_{4\,1/2}$	52
										$3363°_{2\,1/2} - 30425_{2\,1/2}$	−46
3686.992	6	*MB*	27114.662	$5964°_{3\,1/2} - 33079_{3\,1/2}$	46						
3687.191	1	*MB*	27113.198			3694.208	5	*MB*	27061.699		
3687.408	1	*MB*	27111.603			3694.252	3	*MB*	27061.377		
3687.469	3	*MB*	27111.154			3694.372	4	*MB*	27060.498		
3687.549	9	*MB*	27110.566			3694.457	8	*MB*	27059.875		
3687.745	5	*MB*	27109.125	$12762°_{4\,1/2} - 39871_{4\,1/2}$	−66	3694.661	2	*MB*	27058.381		
3687.801	160	*MB*	27108.714	$3593°_{4\,1/2} - 30702_{4\,1/2}$	−13	3694.714	2	*MB*	27057.993		
3687.910	5	*MB*	27107.912			3694.914	240	*MB*	27056.529	$2382°_{4\,1/2} - 29438_{5\,1/2}$	−41
3687.965	4	*MB*	27107.508			3694.956	3	*MB*	27056.221		
3687.986	3	*MB*	27107.354			3695.140	1	*MB*	27054.874		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3695.242	6	*MB*	27054.127	$7278°_{1\,1/2}-34333_{2\,1/2}$	−48	3699.830	3	*MB*	27020.579		
3695.294	4	*MB*	27053.746			3699.915	120	*MB*	27019.958	$6389°_{4\,1/2}-33409_{3\,1/2}$	4
3695.367	1	*MB*	27053.212							$4910°_{5\,1/2}-31930_{4\,1/2}$	−14
3695.429	6	*MB*	27052.758	$6521°_{1\,1/2}-33574_{1\,1/2}$	−54	3700.038	3	*MB*	27019.060		
3695.564	8	*MB*	27051.770			3700.161	1	*MB*	27018.162		
3695.684	1	*MB*	27050.891			3700.281	2	*MB*	27017.286		
3695.736	2	*MB*	27050.511			3700.317	3	*MB*	27017.023		
3695.778	7	*MB*	27050.203			3700.368	1	*MB*	27016.651		
3695.815	3	*MB*	27049.933	$10798°_{2\,1/2}-37848_{2\,1/2}$	−61	3700.437	1	*MB*	27016.147		
3695.841	6	*MB*	27049.742	$8175°_{2\,1/2}-35225_{2\,1/2}$	−50	3700.484	3	*MB*	27015.804		
3695.962	60	*MB*	27048.857	$10924°_{4\,1/2}-37973_{3\,1/2}$	−42	3700.524	1	*MB*	27015.512		
3696.131	50	*MB*	27047.620	$3995°_{3\,1/2}-31043_{2\,1/2}$	−29	3700.703	6	*MB*	27014.205	$13659°_{4\,1/2}-40673_{5\,1/2}$	−40
3696.169	2	*MB*	27047.342	$4511°_{2\,1/2}-31558_{3\,1/2}$	−26	3700.766	7	*MB*	27013.745		
3696.307	9	*MB*	27046.332	$4322°_{2\,1/2}-31369_{2\,1/2}$	−52	3700.894	5	*MB*	27012.811		
3696.402	1	*MB*	27045.637	$10924°_{4\,1/2}-37970_{5\,1/2}$	−18	3701.194	10	*MB*	27010.622	$10641°_{2\,1/2}-37652_{2\,1/2}$	−26
3696.498	9	*MB*	27044.935	$4523°_{4\,1/2}-31568_{4\,1/2}$	−50	3701.465	1	*MB*	27008.644		
3696.678	10	*MB*	27043.618	$5819°_{4\,1/2}-32862_{3\,1/2}$	−35	3701.532	1	*MB*	27008.155		
3696.721	1	*MB*	27043.303			3701.595	1	*MB*	27007.696	$15565°_{2\,1/2}-42573_{3\,1/2}$	−74
3696.838	2	*MB*	27042.447	$7878°_{3\,1/2}-34920_{3\,1/2}$	−12	3701.644	2	*MB*	27007.338		
3696.930	4	*MB*	27041.774			3701.729	10	*MB*	27006.718	$4844°_{1\,1/2}-31851_{2\,1/2}$	−34
3697.125	3	*MB*	27040.348			3701.851	10	*MB*	27005.828	$10798°_{2\,1/2}-37804_{1\,1/2}$	−50
3697.150	1	*MB*	27040.165			3702.024	1	*MB*	27004.566		
3697.204	1	*MB*	27039.770			3702.071	3	*MB*	27004.223	$9198°_{3\,1/2}-36202_{4\,1/2}$	−7
3697.304	6	*MB*	27039.039	$13436_{2\,1/2}\ -40475°_{3\,1/2}$	−31	3702.187	10	*MB*	27003.377	$8804°_{4\,1/2}-35807_{4\,1/2}$	33
3697.673	100	*MB*	27036.341	$7259°_{3\,1/2}-34295_{4\,1/2}$	−33	3702.597	10	*MB*	27000.387	$5716°_{3\,1/2}-32716_{2\,1/2}$	−43
3697.716	5	*MB*	27036.027			3702.788	100	*MB*	26998.994	$3703°_{3\,1/2}-30702_{4\,1/2}$	−21
3697.746	1	*MB*	27035.807			3702.891	4	*MB*	26998.243		
3697.781	5	*MB*	27035.551	$4523°_{4\,1/2}-31558_{3\,1/2}$	−41	3703.096	4	*MB*	26996.749		
3697.909	6	*MB*	27034.616			3703.170	3	*MB*	26996.209		
3698.137	50	*MB*	27032.949	$4201°_{1\,1/2}-31234_{2\,1/2}$	−36	3703.229	4	*MB*	26995.779		
3698.163	10	*MB*	27032.759			3703.339	1	*MB*	26994.977	$7818°_{1\,1/2}-34813_{2\,1/2}$	−77
3698.370	90	*MB*	27031.246	$6521°_{1\,1/2}-33552_{2\,1/2}$	−3	3703.574	7	*MB*	26993.264		
3698.415	3	*MB*	27030.917			3703.681	1	*MB*	26992.485		
3698.483	4	*MB*	27030.420			3703.779	7	*MB*	26991.770		
3698.650	110	*MB*	27029.199	$12365°_{4\,1/2}-39394_{3\,1/2}$	13	3703.909	10	*MB*	26990.823	$7522°_{5\,1/2}-34513_{6\,1/2}$	−23
				$2879°_{5\,1/2}-29908_{4\,1/2}$	−9						
						3703.988	7	*MB*	26990.247	$10088°_{1\,1/2}-37078_{1\,1/2}$	9
3698.715	10	*MB*	27028.725	$4737°_{2\,1/2}-31766_{1\,1/2}$	−10	3704.091	7	*MB*	26989.497		
3698.754	3	*MB*	27028.440			3704.142	7	*MB*	26989.125		
3698.793	1	*MB*	27028.155	$8169°_{1\,1/2}-35197_{1\,1/2}$	13	3704.213	1	*MB*	26988.608		
3698.867	3	*MB*	27027.614			3704.362	8	*MB*	26987.522		
3698.995	1	*MB*	27026.679			3704.444	6	*MB*	26986.925		
3699.183	12	*MB*	27025.305	$9491°_{0\,1/2}-36516_{1\,1/2}$	0	3704.485	6	*MB*	26986.626		
3699.238	3	*MB*	27024.903			3704.662	12	*MB*	26985.337	$7059°_{4\,1/2}-34044_{4\,1/2}$	−31
3699.300	5	*MB*	27024.450			3704.765	3	*MB*	26984.587		
3699.555	3	*MB*	27022.588	$15510_{0\,1/2}\ -42533°_{1\,1/2}$	−85	3704.979	180	*MB*	26983.028	$5819°_{4\,1/2}-32802_{5\,1/2}$	−23
3699.567	3	*MB*	27022.500			3705.054	30	*MB*	26982.482	$2382°_{4\,1/2}-29364_{3\,1/2}$	−11
3699.580	3	*MB*	27022.406			3705.357	12	*MB*	26980.276		
3699.645	6	*MB*	27021.930	$8175°_{2\,1/2}-35197_{1\,1/2}$	−46	3705.736	2	*MB*	26977.516		
3699.711	4	*MB*	27021.448	$7746°_{2\,1/2}-34767_{1\,1/2}$	−57	3705.774	3	*MB*	26977.240		
3699.775	6	*MB*	27020.981			3705.954	4	*MB*	26975.929	$5437°_{3\,1/2}-32413_{3\,1/2}$	6

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3706.024	20	*MB*	26975.420			3713.193	6	*MB*	26923.340		
3706.051	2	*MB*	26975.223			3713.375	1	*MB*	26922.021		
3706.598	6	*MB*	26971.243			3713.463	30	*MB*	26921.383	$4844°_{1\,1/2}-31766_{1\,1/2}$	−81
3706.932	90	*MB*	26968.813	$4201°_{1\,1/2}-31170_{1\,1/2}$	61	3713.583	2	*MB*	26920.513		
3706.981	9	*MB*	26968.456	$4266°_{3\,1/2}-31234_{2\,1/2}$	−25	3713.627	4	*MB*	26920.194		
3707.163	12	*MB*	26967.132			3713.659	10	*MB*	26919.962	$5942°_{3\,1/2}-32862_{3\,1/2}$	−6
3707.398	70	*MB*	26965.423	$4165_{4\,1/2}\ -31130°_{3\,1/2}$	−9	3713.923	5	*MB*	26918.048	$7059°_{4\,1/2}-33977_{3\,1/2}$	−19
3707.457	1	*MB*	26964.994			3713.993	40	*MB*	26917.541	$17976_{2\,1/2}\ -44893°_{3\,1/2}$	15
3707.594	20	*MB*	26963.997	$10114°_{2\,1/2}-37078_{1\,1/2}$	1					$987°_{4\,1/2}-27905_{4\,1/2}$	−4
3707.667	9	*MB*	26963.466	$7202°_{2\,1/2}-34166_{1\,1/2}$	−43	3714.079	2	*MB*	26916.918	$8280°_{2\,1/2}-35197_{1\,1/2}$	24
3707.696	10	*MB*	26963.256	$987°_{4\,1/2}-27950_{5\,1/2}$	−23	3714.125	4	*MB*	26916.585		
3707.923	8	*MB*	26961.605			3714.191	1	*MB*	26916.106		
3708.260	1	*MB*	26959.155			3714.244	4	*MB*	26915.722		
3708.319	8	*MB*	26958.726			3714.522	10	*MB*	26913.708	$9198°_{3\,1/2}-36112_{3\,1/2}$	13
3708.361	5	*MB*	26958.420			3714.633	10	*MB*	26912.904		
3708.518	8	*MB*	26957.279			3714.776	90	*MB*	26911.868	$8804°_{4\,1/2}-35716_{5\,1/2}$	9
3708.747	3	*MB*	26955.615			3714.835	4	*MB*	26911.440		
3708.928	1	*MB*	26954.299			3715.138	30	*MB*	26909.245	$4459°_{3\,1/2}-31369_{2\,1/2}$	25
3708.982	2	*MB*	26953.907			3715.368	2	*MB*	26907.580		
3709.082	3	*MB*	26953.180			3715.436	3	*MB*	26907.087		
3709.146	7	*MB*	26952.715	$7202°_{2\,1/2}-34155_{3\,1/2}$	−66	3715.465	100	*MB*	26906.877	$6389°_{4\,1/2}-33296_{4\,1/2}$	14
3709.285	850	*MB*	26951.705	$4203°_{6\,1/2}-31155_{6\,1/2}$	16	3715.506	2	*MB*	26906.580		
3709.384	7	*MB*	26950.986			3715.601	6	*MB*	26905.892		
3709.412	3	*MB*	26950.782			3715.890	90	*MB*	26903.800		
3709.584	15	*MB*	26949.533	$7818°_{1\,1/2}-34767_{1\,1/2}$	−10	3715.934	2	*MB*	26903.481		
3709.717	4	*MB*	26948.567			3716.078	1	*MB*	26902.439		
3709.926	850	*MB*	26947.049	$987°_{4\,1/2}-27934_{4\,1/2}$	22	3716.154	2	*MB*	26901.888		
3709.965	8	*MB*	26946.765			3716.364	1100	*MB*	26900.368	$0°_{3\,1/2}-26900_{3\,1/2}$	15
3710.159	2	*MB*	26945.356			3716.400	10	*MB*	26900.108		
3710.208	2	*MB*	26945.001	$7061°_{0\,1/2}-34006_{0\,1/2}$	17	3716.707	9	*MB*	26897.886	$5964°_{3\,1/2}-32862_{3\,1/2}$	15
3710.247	7	*MB*	26944.717	$8280°_{2\,1/2}-35225_{2\,1/2}$	8	3716.933	90	*MB*	26896.250	$7259°_{3\,1/2}-34155_{3\,1/2}$	15
3710.396	7	*MB*	26943.635	$8402°_{3\,1/2}-35346_{3\,1/2}$	22	3716.970	2	*MB*	26895.983		
3710.548	3	*MB*	26942.532			3717.031	1	*MB*	26895.541		
3710.693	10	*MB*	26941.479	$4266°_{3\,1/2}-31207_{3\,1/2}$	−50	3717.066	5	*MB*	26895.288		
3710.997	10	*MB*	26939.272	$9198°_{3\,1/2}-36137_{2\,1/2}$	−5	3717.133	6	*MB*	26894.803		
3711.305	7	*MB*	26937.036			3717.207	1	*MB*	26894.268		
3711.428	2	*MB*	26936.144	$5924°_{1\,1/2}-32860_{0\,1/2}$	−4	3717.289	3	*MB*	26893.675		
3711.479	1	*MB*	26935.773			3717.397	2	*MB*	26892.893		
3711.787	10	*MB*	26933.538	$3703°_{3\,1/2}-30637_{2\,1/2}$	−24	3717.482	60	*MB*	26892.279	$6517°_{2\,1/2}-33409_{3\,1/2}$	1
3711.829	1	*MB*	26933.234			3717.525	1	*MB*	26891.967		
3711.906	3	*MB*	26932.675			3717.564	6	*MB*	26891.685	$3745°_{1\,1/2}-30637_{2\,1/2}$	4
3711.948	4	*MB*	26932.370			3717.619	6	*MB*	26891.287		
3712.097	8	*MB*	26931.289	$10684°_{0\,1/2}-37615_{0\,1/2}$	−3	3717.699	2	*MB*	26890.709		
3712.368	1	*MB*	26929.323			3717.822	3	*MB*	26889.819		
3712.547	5	*MB*	26928.025			3718.064	10	*MB*	26888.069	$10035°_{5\,1/2}-36923_{4\,1/2}$	−8
										$10454°_{1\,1/2}-37342_{2\,1/2}$	14
3712.718	7	*MB*	26926.785	$5010°_{2\,1/2}-31937_{3\,1/2}$	2						
3712.767	2	*MB*	26926.429			3718.185	340	*MB*	26887.194	$1410°_{4\,1/2}-28297_{3\,1/2}$	25
3712.817	2	*MB*	26926.067	$15803_{4\,1/2}\ -42729°_{5\,1/2}$	−69	3718.227	3	*MB*	26886.890		
3712.961	7	*MB*	26925.023			3718.312	5	*MB*	26886.276		
3713.043	7	*MB*	26924.428	$1410°_{4\,1/2}-28334_{4\,1/2}$	−23	3718.380	340	*WA*	26885.784	$4203°_{6\,1/2}-31089_{5\,1/2}$	−12

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3718.413	9	*MB*	26885.545			3724.522	8	*MB*	26841.449	$0°_{3\,1/2}-26841_{4\,1/2}$	65
3718.454	9	*MB*	26885.249	$4322°_{2\,1/2}-31207_{3\,1/2}$	30	3724.640	120	*MB*	26840.598	$5010°_{2\,1/2}-31851_{2\,1/2}$	72
3718.651	1	*MB*	26883.825			3724.722	4	*MB*	26840.007		
3718.690	3	*MB*	26883.543	$11949°_{3\,1/2}-38832_{2\,1/2}$	23	3724.876	1	*MB*	26838.898		
3718.818	7	*MB*	26882.618	$9634°_{1\,1/2}-36516_{1\,1/2}$	6	3724.901	3	*MB*	26838.718		
3718.965	8	*MB*	26881.555			3725.323	3	*MB*	26835.678		
3719.080	10	*MB*	26880.724	$12057°_{2\,1/2}-38937_{1\,1/2}$	15	3725.394	5	*MB*	26835.166		
				$5437°_{3\,1/2}-32318_{3\,1/2}$	−28	3725.515	1	*MB*	26834.295		
3719.171	6	*MB*	26880.066	$8927°_{5\,1/2}-35807_{4\,1/2}$	12	3725.604	10	*MB*	26833.654	$3995°_{3\,1/2}-30829_{3\,1/2}$	−9
3719.272	3	*MB*	26879.336			3725.667	340	*MB*	26833.200	$5969°_{5\,1/2}-32802_{5\,1/2}$	42
3719.435	10	*MB*	26878.158			3725.772	4	*MB*	26832.444		
3719.469	2	*MB*	26877.913			3725.861	2	*MB*	26831.803		
3719.516	8	*MB*	26877.573			3726.359	1	*MB*	26828.217		
3719.669	4	*MB*	26876.468			3726.456	12	*MB*	26827.518	$4910°_{5\,1/2}-31738_{5\,1/2}$	−2
3719.792	170	*MB*	26875.579	$2563°_{5\,1/2}-29438_{5\,1/2}$	−4	3726.611	4	*MB*	26826.403	$13012°_{2\,1/2}-39838_{2\,1/2}$	53
3719.828	5	*MB*	26875.319			3726.654	1	*MB*	26826.093		
3719.919	7	*MB*	26874.661			3726.959	140	*MB*	26823.898	$987°_{4\,1/2}-27811_{3\,1/2}$	13
3719.969	10	*MB*	26874.300			3727.113	5	*MB*	26822.790		
3720.006	2	*MB*	26874.033			3727.248	5	*MB*	26821.818		
3720.299	6	*MB*	26871.916			3727.326	12	*MB*	26821.257	$4737°_{2\,1/2}-31558_{3\,1/2}$	4
3720.567	12	*MB*	26869.981			3727.664	12	*MB*	26818.825	$5118°_{2\,1/2}-31937_{3\,1/2}$	−21
3720.695	3	*MB*	26869.056			3727.905	10	*MB*	26817.091		
3721.003	2	*MB*	26866.832			3728.017	400	*MB*	26816.286	$5675°_{4\,1/2}-32492_{5\,1/2}$	11
3721.327	7	*MB*	26864.493			3728.064	10	*MB*	26815.948	$7092_{5\,1/2}-33908°_{4\,1/2}$	20
3721.397	6	*MB*	26863.988			3728.178	90	*MB*	26815.128	$2634°_{2\,1/2}-29449_{1\,1/2}$	16
3721.525	1	*MB*	26863.064			3728.229	1	*MB*	26814.761		
3721.658	3	*MB*	26862.104			3728.328	10	*MB*	26814.049		
3721.775	1	*MB*	26861.259			3728.414	650	*MB*	26813.430	$5455°_{7\,1/2}-32269_{7\,1/2}$	24
3721.798	2	*MB*	26861.094			3728.456	12	*MB*	26813.128		
3721.917	2	*MB*	26860.235	$11949°_{3\,1/2}-38809_{3\,1/2}$	−51	3728.729	12	*MB*	26811.165		
3721.951	4	*MB*	26859.989	$6549°_{2\,1/2}-33409_{3\,1/2}$	1	3728.772	7	*MB*	26810.856	$7233°_{5\,1/2}-34044_{4\,1/2}$	42
3722.101	50	*MB*	26858.907	$5513_{5\,1/2}-32372°_{4\,1/2}$	−4	3729.001	40	*MB*	26809.210	$4266°_{3\,1/2}-31075_{4\,1/2}$	4
3722.284	120	*MB*	26857.587	$2581°_{4\,1/2}-29438_{5\,1/2}$	27	3729.191	6	*MB*	26807.844		
3722.762	90	*MB*	26854.138	$2595°_{1\,1/2}-29449_{1\,1/2}$	4	3729.322	1	*MB*	26806.902		
3722.835	3	*MB*	26853.611	$10798°_{2\,1/2}-37652_{2\,1/2}$	76	3729.424	2	*MB*	26806.169		
3722.981	1	*MB*	26852.558			3729.570	3	*MB*	26805.120		
3723.055	3	*MB*	26852.025			3729.707	8	*MB*	26804.135		
3723.109	4	*MB*	26851.635	$8774_{4\,1/2}-35625°_{3\,1/2}$	0	3729.916	60	*MB*	26802.633	$3363°_{2\,1/2}-30166_{3\,1/2}$	3
3723.165	3	*MB*	26851.232	$1873°_{3\,1/2}-28725_{4\,1/2}$	18	3730.116	2	*MB*	26801.196		
3723.289	4	*MB*	26850.337			3730.268	8	*MB*	26800.104	$13675_{2\,1/2}-40475°_{3\,1/2}$	−98
3723.457	2	*MB*	26849.126			3730.338	110	*MB*	26799.601	$11742°_{5\,1/2}-38541_{4\,1/2}$	−26
3723.628	35	*MB*	26847.893	$4322°_{2\,1/2}-31170_{1\,1/2}$	−43	3730.441	2	*MB*	26798.861		
3723.796	2	*MB*	26846.682			3730.601	5	*MB*	26797.712		
3723.859	5	*MB*	26846.227	$10684°_{0\,1/2}-37530_{1\,1/2}$	36	3730.655	12	*MB*	26797.324		
3723.917	1	*MB*	26845.809			3730.747	8	*MB*	26796.663	$11007°_{1\,1/2}-37804_{1\,1/2}$	28
3723.946	1	*MB*	26845.600			3730.849	1	*MB*	26795.931		
3724.209	9	*MB*	26843.704			3730.896	1	*MB*	26795.593		
3724.284	8	*MB*	26843.164			3731.110	15	*MB*	26794.056		
3724.383	3	*MB*	26842.451			3731.332	3	*MB*	26792.462	$5924°_{1\,1/2}-32716_{2\,1/2}$	19
3724.437	4	*MB*	26842.061			3731.439	4	*MB*	26791.694		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3731.685	12	*MB*	26789.928	$10798°_{2\,1/2}-37588_{3\,1/2}$	10	3737.967	10	*MB*	26744.906	$20714_{2\,1/2}-47459°_{2\,1/2}$	−28
3731.873	90	*MB*	26788.578	$8927°_{5\,1/2}-35716_{5\,1/2}$	9					$8175°_{2\,1/2}-34920_{3\,1/2}$	−18
3731.977	2	*MB*	26787.831			3738.076	7	*MB*	26744.126		
3732.180	10	*MB*	26786.374			3738.362	1	*MB*	26742.080		
3732.318	7	*MB*	26785.384	$7259°_{3\,1/2}-34044_{4\,1/2}$	18	3738.574	1	*MB*	26740.564		
3732.432	5	*MB*	26784.566			3738.735	2	*MB*	26739.412		
3732.460	80	*MB*	26784.365	$2382°_{4\,1/2}-29166_{4\,1/2}$	14	3738.844	6	*MB*	26738.632		
3732.580	25	*WA*	26783.504	$2581°_{4\,1/2}-29364_{3\,1/2}$	21	3738.871	4	*MB*	26738.440	$12097_{3\,1/2}-38835°_{2\,1/2}$	−17
3732.942	2	*MB*	26780.907			3738.995	4	*MB*	26737.553	$5675°_{4\,1/2}-32413_{3\,1/2}$	−29
3732.986	3	*MB*	26780.591			3739.116	1	*MB*	26736.688		
3733.006	4	*MB*	26780.448			3739.222	1	*MB*	26735.930		
3733.092	10	*MB*	26779.831			3739.265	1	*MB*	26735.622		
3733.230	2	*MB*	26778.841	$10114°_{2\,1/2}-36893_{3\,1/2}$	−45	3739.528	2	*MB*	26733.742		
3733.440	1	*MB*	26777.335			3739.690	10	*MB*	26732.584	$5118°_{2\,1/2}-31851_{2\,1/2}$	−6
3733.524	120	*MB*	26776.732	$4266°_{3\,1/2}-31043_{2\,1/2}$	19	3739.763	7	*MB*	26732.062	$10798°_{2\,1/2}-37530_{1\,1/2}$	−15
3733.567	4	*MB*	26776.424			3740.017	2	*MB*	26730.247	$8131_{4\,1/2}-34861°_{5\,1/2}$	−61
3733.680	3	*MB*	26775.613	$12057°_{2\,1/2}-38832_{2\,1/2}$	12	3740.044	9	*MB*	26730.054	$2634°_{2\,1/2}-29364_{3\,1/2}$	−19
3733.766	7	*MB*	26774.997	$4459°_{3\,1/2}-31234_{2\,1/2}$	−9	3740.129	60	*MB*	26729.446	$10114°_{2\,1/2}-36844_{2\,1/2}$	24
3733.816	4	*MB*	26774.638	$7202°_{2\,1/2}-33977_{3\,1/2}$	27	3740.174	2	*MB*	26729.125		
3733.928	4	*MB*	26773.835	$5942°_{3\,1/2}-32716_{2\,1/2}$	−13	3740.197	3	*MB*	26728.960		
3734.070	12	*MB*	26772.817	$7522°_{5\,1/2}-34295_{4\,1/2}$	−11	3740.288	1	*MB*	26728.310		
3734.295	1	*MB*	26771.204			3740.413	9	*MB*	26727.417	$9198°_{3\,1/2}-35925_{3\,1/2}$	61
3734.534	1	*MB*	26769.491			3740.577	10	*MB*	26726.245	$13784°_{1\,1/2}-40511_{1\,1/2}$	−47
3734.585	6	*MB*	26769.125			3740.621	1	*MB*	26725.931		
3735.145	2	*MB*	26765.112			3740.738	1	*MB*	26725.095		
3735.196	1	*MB*	26764.746	$8169°_{1\,1/2}-34934_{2\,1/2}$	22	3740.786	4	*MB*	26724.752		
3735.254	2	*MB*	26764.331			3740.856	5	*MB*	26724.252		
3735.307	3	*MB*	26763.951			3741.007	60	*MB*	26723.173	$2641°_{3\,1/2}-29364_{3\,1/2}$	−7
3735.449	2	*MB*	26762.934			3741.183	15	*MB*	26721.916		
3735.642	10	*MB*	26761.551			3741.205	10	*MB*	26721.759	$3703°_{3\,1/2}-30425_{2\,1/2}$	4
3735.779	10	*MB*	26760.569	$5437°_{3\,1/2}-32197_{4\,1/2}$	10	3741.394	15	*MB*	26720.409	$4322°_{2\,1/2}-31043_{2\,1/2}$	7
3735.911	9	*MB*	26759.624	$4201°_{1\,1/2}-30961_{1\,1/2}$	0	3741.440	7	*MB*	26720.080		
3735.960	7	*MB*	26759.273			3741.721	60	*MB*	26718.074	$7259°_{3\,1/2}-33977_{3\,1/2}$	9
3735.997	6	*MB*	26759.008			3741.764	2	*MB*	26717.767		
3736.057	10	*MB*	26758.578	$8175°_{2\,1/2}-34934_{2\,1/2}$	19	3741.828	1	*MB*	26717.310		
3736.358	15	*MB*	26756.423			3741.881	1	*MB*	26716.931		
3736.432	12	*MB*	26755.893	$5616_{4\,1/2}-32372°_{4\,1/2}$	11	3742.122	1	*MB*	26715.211	$20714_{2\,1/2}-47430°_{3\,1/2}$	−13
3736.524	7	*MB*	26755.234	$5010°_{2\,1/2}-31766_{1\,1/2}$	−4	3742.301	8	*MB*	26713.933	$5924°_{1\,1/2}-32638_{1\,1/2}$	−27
3736.573	7	*MB*	26754.883	$8702°_{1\,1/2}-35457_{1\,1/2}$	10	3742.602	1	*MB*	26711.785		
3736.741	3	*MB*	26753.680			3742.664	3	*MB*	26711.342		
3736.831	1	*MB*	26753.036			3742.853	4	*MB*	26709.993		
3736.908	20	*MB*	26752.485	$13758°_{1\,1/2}-40511_{1\,1/2}$	28	3742.923	7	*MB*	26709.494		
				$7059°_{4\,1/2}-33811_{4\,1/2}$	−9	3743.125	6	*MB*	26708.052		
3737.011	10	*MB*	26751.747	$5964°_{3\,1/2}-32716_{2\,1/2}$	−3	3743.171	3	*MB*	26707.724		
3737.342	1	*MB*	26749.378			3743.254	10	*MB*	26707.132	$3995°_{3\,1/2}-30702_{4\,1/2}$	−17
3737.412	80	*MB*	26748.877	$8278_{5\,1/2}-35026°_{4\,1/2}$	−12	3743.359	8	*MB*	26706.383		
3737.464	3	*MB*	26748.505			3743.579	5	*MB*	26704.814		
3737.526	90	*MB*	26748.061	$4459°_{3\,1/2}-31207_{3\,1/2}$	7	3743.662	3	*MB*	26704.221		
3737.732	130	*MB*	26746.587	$6913°_{6\,1/2}-33659_{5\,1/2}$	12	3743.780	2	*MB*	26703.380		
3737.838	1	*MB*	26745.829			3743.802	1	*MB*	26703.223		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3744.014	10	*MB*	26701.711	$3363°_{2\,1/2}-30065_{3\,1/2}$	−25	3749.964	7	*MB*	26659.345	$4511°_{2\,1/2}-31170_{1\,1/2}$	−42
3744.076	40	*MB*	26701.269	$5437°_{3\,1/2}-32138_{2\,1/2}$	−6	3750.072	140	*MB*	26658.577	$6638°_{4\,1/2}-33296_{4\,1/2}$	30
3744.212	1	*MB*	26700.299			3750.122	3	*MB*	26658.222		
3744.286	2	*MB*	26699.771			3750.178	5	*MB*	26657.824		
3744.381	1	*MB*	26699.094			3750.290	8	*MB*	26657.027	$4910°_{5\,1/2}-31568_{4\,1/2}$	−28
3744.438	2	*MB*	26698.687			3750.454	8	*MB*	26655.862	$6521°_{1\,1/2}-33177_{0\,1/2}$	−1
3744.659	10	*MB*	26697.112	$5716°_{3\,1/2}-32413_{3\,1/2}$	−17	3750.494	3	*MB*	26655.577		
3744.847	1	*MB*	26695.771			3750.650	5	*MB*	26654.469	$9634°_{1\,1/2}-36288_{0\,1/2}$	−3
3744.908	2	*MB*	26695.337			3750.716	12	*MB*	26654.000		
3745.093	6	*MB*	26694.018			3750.910	2	*MB*	26652.621		
3745.162	6	*MB*	26693.526			3750.998	120	*MB*	26651.996	$3593°_{4\,1/2}-30245_{4\,1/2}$	0
3745.349	6	*MB*	26692.194			3751.043	3	*MB*	26651.676		
3745.605	1	*MB*	26690.369			3751.115	3	*MB*	26651.165		
3745.657	4	*MB*	26689.999			3751.212	9	*MB*	26650.476		
3745.769	1	*MB*	26689.201			3751.376	10	*MB*	26649.311		
3745.921	2	*MB*	26688.118			3751.441	200	*MB*	26648.849	$10274°_{3\,1/2}-36923_{4\,1/2}$	31
3746.049	3	*MB*	26687.206			3751.487	7	*MB*	26648.522		
3746.102	5	*MB*	26686.828			3751.551	10	*MB*	26648.068	$11325°_{2\,1/2}-37973_{3\,1/2}$	73
3746.259	50	*MB*	26685.710	$2595°_{1\,1/2}-29281_{2\,1/2}$	−19	3751.592	10	*MB*	26647.776		
3746.376	140	*MB*	26684.877	$4523°_{4\,1/2}-31207_{3\,1/2}$	−16	3751.667	1	*MB*	26647.244	$5118°_{2\,1/2}-31766_{1\,1/2}$	−58
3746.478	2	*MB*	26684.150			3751.744	30	*MB*	26646.697	$2634°_{2\,1/2}-29281_{2\,1/2}$	−10
3746.770	2	*MB*	26682.070			3751.860	6	*MB*	26645.873		
3746.871	2	*MB*	26681.351			3751.956	2	*MB*	26645.191		
3747.081	7	*MB*	26679.856	$7746°_{2\,1/2}-34426_{2\,1/2}$	4	3752.084	4	*MB*	26644.282	$11007°_{1\,1/2}-37652_{2\,1/2}$	−9
				$3745°_{1\,1/2}-30425_{2\,1/2}$	−17	3752.191	12	*MB*	26643.522	$8169°_{1\,1/2}-34813_{2\,1/2}$	19
3747.147	2	*MB*	26679.386			3752.251	1	*MB*	26643.096		
3747.174	2	*MB*	26679.194			3752.350	110	*MB*	26642.393	$5675°_{4\,1/2}-32318_{3\,1/2}$	−18
3747.284	1	*MB*	26678.411			3752.448	10	*MB*	26641.698	$3995°_{3\,1/2}-30637_{2\,1/2}$	1
3747.342	1	*MB*	26677.998			3752.498	2	*MB*	26641.343		
3747.770	6	*MB*	26674.951	$17976_{2\,1/2}\ -44651°_{1\,1/2}$	61	3752.571	10	*MB*	26640.824		
3747.931	8	*MB*	26673.805	$7202°_{2\,1/2}-33876_{1\,1/2}$	−42	3752.714	10	*MB*	26639.809	$8280°_{2\,1/2}-34920_{3\,1/2}$	−32
3747.959	4	*MB*	26673.606							$2641°_{3\,1/2}-29281_{2\,1/2}$	−5
3748.056	260	*MB*	26672.916	$5819°_{4\,1/2}-32492_{5\,1/2}$	−8	3752.857	9	*MB*	26638.794	$4322°_{2\,1/2}-30961_{1\,1/2}$	−15
3748.161	3	*MB*	26672.169			3753.114	1	*MB*	26636.970		
3748.277	7	*MB*	26671.287			3753.242	3	*MB*	26636.062		
3748.341	9	*MB*	26670.888			3753.654	4	*MB*	26633.138	$11340°_{3\,1/2}-37973_{3\,1/2}$	−39
3748.486	1	*MB*	26669.856			3753.763	60	*MB*	26632.365	$12762°_{4\,1/2}-39394_{3\,1/2}$	13
3748.558	1	*MB*	26669.344			3753.854	3	*MB*	26631.719	$4737°_{2\,1/2}-31369_{2\,1/2}$	0
3748.628	2	*MB*	26668.846			3753.962	5	*MB*	26630.953	$6517°_{2\,1/2}-33148_{2\,1/2}$	−16
3748.755	8	*MB*	26667.942			3754.052	4	*MB*	26630.315		
3748.832	2	*MB*	26667.395			3754.214	5	*MB*	26629.165		
3748.967	1	*MB*	26666.434			3754.294	5	*MB*	26628.598		
3749.036	6	*MB*	26665.944			3754.484	15	*MB*	26627.251	$6521°_{1\,1/2}-33148_{2\,1/2}$	−5
3749.102	5	*MB*	26665.474			3754.591	4	*MB*	26626.492		
3749.156	7	*MB*	26665.090			3754.634	1	*MB*	26626.187		
3749.365	12	*MB*	26663.604	$10924°_{4\,1/2}-37588_{3\,1/2}$	7	3754.761	6	*MB*	26625.286		
3749.624	3	*MB*	26661.762			3755.038	10	*MB*	26623.322		
3749.662	6	*MB*	26661.492			3755.213	5	*MB*	26622.082		
3749.705	1	*MB*	26661.186			3755.272	2	*MB*	26621.663		
3749.742	1	*MB*	26660.923			3755.415	160	*MB*	26620.650	$3363°_{2\,1/2}-29984_{1\,1/2}$	25

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TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3755.684	9	*MB*	26618.743	$10274°_{3\,1/2}-36893_{3\,1/2}$	−55	3761.913	4	*MB*	26574.668		
3755.716	140	*MB*	26618.516	$5616_{4\,1/2}-32235°_{3\,1/2}$	16	3761.940	10	*MB*	26574.478		
3755.789	15	*MB*	26617.999	$6913°_{6\,1/2}-33531_{6\,1/2}$	3	3762.084	3	*MB*	26573.461		
3755.931	1	*MB*	26616.993			3762.210	7	*MB*	26572.571	$12260°_{3\,1/2}-38832_{2\,1/2}$	−49
3755.984	2	*MB*	26616.617			3762.280	3	*WA*	26572.076	$9053_{3\,1/2}-35625°_{3\,1/2}$	6
3756.065	1	*MB*	26616.043			3762.335	3	*MB*	26571.688		
3756.114	3	*MB*	26615.696	$4459°_{3\,1/2}-31075_{4\,1/2}$	−34	3762.408	2	*MB*	26571.172		
3757.030	4	*MB*	26609.207	$9198°_{3\,1/2}-35807_{4\,1/2}$	−34	3762.577	3	*MB*	26569.979		
3757.214	130	*MB*	26607.904	$11007°_{1\,1/2}-37615_{0\,1/2}$	−30	3762.671	4	*MB*	26569.315	$10274°_{3\,1/2}-36844_{2\,1/2}$	−18
				$7818°_{1\,1/2}-34426_{2\,1/2}$	14	3762.720	4	*MB*	26568.969		
3757.496	20	*MB*	26605.907	$19982_{4\,1/2}-46588°_{5\,1/2}$	−36	3762.761	1	*MB*	26568.680		
3757.700	5	*MB*	26604.462			3762.971	240	*MB*	26567.197	$7341_{5\,1/2}-33908°_{4\,1/2}$	11
3757.799	6	*MB*	26603.762			3763.261	5	*MB*	26565.150		
3757.856	130	*MB*	26603.358	$2563°_{5\,1/2}-29166_{4\,1/2}$	−5	3763.314	1	*MB*	26564.776		
3758.057	6	*MB*	26601.935	$5716°_{3\,1/2}-32318_{3\,1/2}$	−23	3763.334	10	*MB*	26564.634		
3758.203	12	*MB*	26600.902	$7059°_{4\,1/2}-33659_{5\,1/2}$	6	3763.429	3	*MB*	26563.964		
3758.442	1	*MB*	26599.210			3763.605	70	*MB*	26562.722	$4266°_{3\,1/2}-30829_{3\,1/2}$	−4
3758.474	5	*MB*	26598.984			3763.722	12	*MB*	26561.896	$6517°_{2\,1/2}-33079_{3\,1/2}$	3
3758.521	12	*MB*	26598.651	$6549°_{2\,1/2}-33148_{2\,1/2}$	−29	3764.115	550	*MB*	26559.123	$2879°_{5\,1/2}-29438_{5\,1/2}$	1
3758.687	10	*MB*	26597.476	$7278°_{1\,1/2}-33876_{1\,1/2}$	22	3764.226	4	*MB*	26558.340		
3758.943	1	*MB*	26595.665			3764.312	2	*MB*	26557.733		
3758.990	1	*MB*	26595.333			3764.403	10	*MB*	26557.091		
3759.016	2	*MB*	26595.149			3764.540	4	*MB*	26556.125		
3759.082	2	*MB*	26594.682			3764.613	12	*MB*	26555.610	$18393_{3\,1/2}-44949°_{4\,1/2}$	−73
3759.149	12	*MB*	26594.208	$5819°_{4\,1/2}-32413_{3\,1/2}$	−24	3764.650	10	*MB*	26555.348		
3759.230	8	*MB*	26593.635			3764.701	2	*MB*	26554.989		
3759.258	2	*MB*	26593.437			3764.809	1	*MB*	26554.227		
3759.291	3	*MB*	26593.203			3764.895	2	*MB*	26553.620		
3759.311	3	*MB*	26593.062			3765.044	160	*MB*	26552.570	$4523°_{4\,1/2}-31075_{4\,1/2}$	0
3759.365	3	*MB*	26592.680	$11949°_{3\,1/2}-38541_{4\,1/2}$	−3	3765.111	1	*MB*	26552.097		
3759.439	4	*MB*	26592.156			3765.155	2	*MB*	26551.787		
3759.486	2	*MB*	26591.824	$8175°_{2\,1/2}-34767_{1\,1/2}$	−3	3765.246	5	*MB*	26551.145		
3759.607	4	*MB*	26590.968	$10641°_{2\,1/2}-37232_{1\,1/2}$	−27	3765.276	1	*MB*	26550.934		
3759.657	3	*MB*	26590.614			3765.416	5	*MB*	26549.946		
3759.888	1	*MB*	26588.981			3765.521	4	*MB*	26549.206	$7259°_{3\,1/2}-33808_{2\,1/2}$	−35
3760.130	3	*MB*	26587.270			3765.639	1	*MB*	26548.374		
3760.178	7	*MB*	26586.930	$7746°_{2\,1/2}-34333_{2\,1/2}$	17	3765.737	6	*MB*	26547.683	$7878°_{3\,1/2}-34426_{2\,1/2}$	−25
3760.313	2	*MB*	26585.976	$11387°_{3\,1/2}-37973_{3\,1/2}$	−68	3765.804	4	*MB*	26547.211		
3760.404	40	*MB*	26585.332	$2581°_{4\,1/2}-29166_{4\,1/2}$	−7	3765.889	70	*MB*	26546.612	$5651°_{5\,1/2}-32197_{4\,1/2}$	−12
3760.532	2	*MB*	26584.427			3765.946	10	*MB*	26546.210		
3760.673	5	*MB*	26583.431	$8278_{5\,1/2}-34861°_{5\,1/2}$	−40	3766.167	1	*MB*	26544.652		
3760.701	60	*MB*	26583.233	$4459°_{3\,1/2}-31043_{2\,1/2}$	−4	3766.261	2	*MB*	26543.990		
3760.826	6	*MB*	26582.349	$7713°_{4\,1/2}-34295_{4\,1/2}$	−11	3766.293	5	*MB*	26543.764	$10798°_{2\,1/2}-37342_{2\,1/2}$	−7
3761.103	3	*MB*	26580.392			3766.350	4	*MB*	26543.363	$4201°_{1\,1/2}-30745_{1\,1/2}$	−29
3761.185	10	*MB*	26579.812	$11949°_{3\,1/2}-38529_{2\,1/2}$	−19	3766.392	3	*MB*	26543.067		
3761.308	6	*MB*	26578.943			3766.506	80	*MB*	26542.263	$3703°_{3\,1/2}-30245_{4\,1/2}$	−20
3761.467	3	*MB*	26577.819			3766.535	50	*MB*	26542.059	$8804°_{4\,1/2}-35346_{3\,1/2}$	1
3761.527	1	*MB*	26577.396			3766.684	15	*MB*	26541.009	$3593°_{4\,1/2}-30134_{5\,1/2}$	−18
3761.705	2	*MB*	26576.138			3766.739	7	*MB*	26540.622	$1410°_{4\,1/2}-27950_{5\,1/2}$	35
3761.791	2	*MB*	26575.530			3766.950	2	*MB*	26539.135		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3766.981	1	*MB*	26538.917			3773.200	70	*MB*	26495.176	$6549°_{2\,1/2}-33045_{2\,1/2}$	−10
3767.263	7	*MB*	26536.930			3773.246	50	*MB*	26494.853	$1410°_{4\,1/2}-27905_{4\,1/2}$	0
3767.561	8	*MB*	26534.831			3773.437	60	*MB*	26493.512	$5437°_{3\,1/2}-31930_{4\,1/2}$	−1
3767.870	10	*MB*	26532.655	$6517°_{2\,1/2}-33050_{1\,1/2}$	−16	3773.658	5	*MB*	26491.960		
3767.905	4	*MB*	26532.409			3773.880	30	*MB*	26490.402		
3767.928	9	*MB*	26532.247	$8280°_{2\,1/2}-34813_{2\,1/2}$	−8	3774.039	5	*MB*	26489.286	$20940_{3\,1/2}-47430°_{3\,1/2}$	−58
3767.996	40	*MB*	26531.768	$8402°_{3\,1/2}-34934_{2\,1/2}$	13	3774.339	2	*MB*	26487.181		
3768.079	10	*MB*	26531.183			3774.402	15	*MB*	26486.739	$8280°_{2\,1/2}-34767_{1\,1/2}$	−5
3768.235	1	*MB*	26530.085			3774.475	2	*MB*	26486.226		
3768.306	20	*MB*	26529.585	$6549°_{2\,1/2}-33079_{3\,1/2}$	−18	3774.737	1	*MB*	26484.388	$7522°_{0\,1/2}-34006_{0\,1/2}$	24
3768.333	5	*MB*	26529.395	$7278°_{1\,1/2}-33808_{2\,1/2}$	0	3774.928	5	*MB*	26483.048	$5283°_{0\,1/2}-31766_{1\,1/2}$	−31
3768.611	10	*MB*	26527.438	$6517°_{2\,1/2}-33045_{2\,1/2}$	−37	3775.030	2	*MB*	26482.333		
3768.673	9	*MB*	26527.002	$987°_{4\,1/2}-27514_{3\,1/2}$	−46	3775.115	5	*MB*	26481.736	$5716°_{3\,1/2}-32197_{4\,1/2}$	−29
3768.770	240	*MB*	26526.319	$8402°_{3\,1/2}-34928_{4\,1/2}$	18	3775.297	10	*MB*	26480.460		
3768.895	1	*MB*	26525.439			3775.355	25	*MB*	26480.053		
3769.044	80	*MB*	26524.391	$1410°_{4\,1/2}-27934_{4\,1/2}$	57	3775.558	30	*MB*	26478.629	$11325°_{2\,1/2}-37804_{1\,1/2}$	−23
				$4844°_{1\,1/2}-31369_{2\,1/2}$	−57	3775.832	2	*MB*	26476.708		
3769.129	4	*MB*	26523.793	$7011_{4\,1/2}-33535°_{3\,1/2}$	−38	3775.900	5	*MB*	26476.231		
				$6521°_{1\,1/2}-33045_{2\,1/2}$	30	3775.936	15	*MB*	26475.979		
3769.214	2	*MB*	26523.194	$8702°_{1\,1/2}-35225_{2\,1/2}$	−17	3775.997	25	*MB*	26475.551	$3508°_{0\,1/2}-29984_{1\,1/2}$	−30
3769.241	7	*MB*	26523.005	$5969°_{5\,1/2}-32492_{5\,1/2}$	−25	3776.145	60b	*MB*	26474.513	$15517°_{6\,1/2}-41992_{6\,1/2}$	−70
3769.267	10	*MB*	26522.822	$11007°_{1\,1/2}-37530_{1\,1/2}$	−11	3776.392	5	*MB*	26472.782	$6389°_{4\,1/2}-32862_{3\,1/2}$	−42
3769.358	9	*MB*	26522.181	$5675°_{4\,1/2}-32197_{4\,1/2}$	−37	3776.432	15	*MB*	26472.501		
3769.408	10	*MB*	26521.829	$7522°_{5\,1/2}-34044_{4\,1/2}$	10	3776.527	4	*MB*	26471.835	$12057°_{2\,1/2}-38529_{2\,1/2}$	−78
3769.553	1	*MB*	26520.809			3776.604	200	*MB*	26471.296	$3593°_{4\,1/2}-30065_{3\,1/2}$	14
3769.591	1	*MB*	26520.542			3776.715	50	*MB*	26470.518	$5942°_{3\,1/2}-32413_{3\,1/2}$	−29
3769.749	3	*MB*	26519.430							$4737°_{2\,1/2}-31207_{3\,1/2}$	−35
3769.844	2	*MB*	26518.762			3776.922	15	*MB*	26469.067		
3769.931	130	*MB*	26518.150	$8402°_{3\,1/2}-34920_{3\,1/2}$	31	3777.007	2	*MB*	26468.471		
3769.982	4	*MB*	26517.792			3777.046	5	*MB*	26468.198	$15565°_{2\,1/2}-42033_{2\,1/2}$	−36
3770.209	30	*MB*	26516.195			3777.240	5	*MB*	26466.838		
3770.386	30	*MB*	26514.950	$7818°_{1\,1/2}-34333_{2\,1/2}$	0	3777.663	110	*MB*	26463.875	$1873°_{3\,1/2}-28337_{2\,1/2}$	−4
3770.518	2	*MB*	26514.022			3778.037	25	*MB*	26461.255		
3770.763	170	*MB*	26512.299	$7061°_{0\,1/2}-33574_{1\,1/2}$	−7	3778.252	5	*MB*	26459.750		
3770.837	20	*MB*	26511.779			3778.406	2	*MB*	26458.671		
3770.996	2	*MB*	26510.661			3778.447	15	*MB*	26458.384		
3771.261	20	*MB*	26508.798	$8789_{2\,1/2}-35298°_{2\,1/2}$	−11	3778.585	10	*MB*	26457.418		
3771.383	25	*MB*	26507.941	$11340°_{3\,1/2}-37848_{2\,1/2}$	−10	3778.736	5	*MB*	26456.360		
3771.456	10	*MB*	26507.428			3778.759	10	*MB*	26456.200		
3771.600	240	*MB*	26506.416	$4322°_{2\,1/2}-30829_{3\,1/2}$	0	3778.963	12	*MB*	26454.771	$7878°_{3\,1/2}-34333_{2\,1/2}$	2
3771.864	2	*MB*	26504.560			3779.044	15	*MB*	26454.204		
3771.926	7	*MB*	26504.125	$4165_{4\,1/2}-30669°_{4\,1/2}$	−26	3779.260	2	*MB*	26452.692		
3772.028	30	*MB*	26503.408	$9634°_{1\,1/2}-36137_{2\,1/2}$	−9	3779.416	2	*MB*	26451.601		
3772.164	10	*MB*	26502.453			3779.606	35	*MB*	26450.271	$4511°_{2\,1/2}-30961_{1\,1/2}$	10
3772.294	10	*MB*	26501.539			3779.866	30	*MB*	26448.452	$5964°_{3\,1/2}-32413_{3\,1/2}$	2
3772.390	2	*MB*	26500.865			3780.137	2	*MB*	26446.555		
3772.464	30	*MB*	26500.345	$6549°_{2\,1/2}-33050_{1\,1/2}$	−37	3780.294	2	*MB*	26445.457		
3772.650	50	*MB*	26499.039	$5819°_{4\,1/2}-32318_{3\,1/2}$	−22	3780.554	30	*MB*	26443.638	$12365°_{4\,1/2}-38809_{3\,1/2}$	−31
3772.871	50	*MB*	26497.487	$4737°_{2\,1/2}-31234_{2\,1/2}$	−18					$3363°_{2\,1/2}-29807_{3\,1/2}$	−12
3772.919	7	*MB*	26497.149			3780.761	15	*MB*	26442.191	$7713°_{4\,1/2}-34155_{3\,1/2}$	−30

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3780.816	2	*MB*	26441.806			3789.838	20	*MB*	26378.861	$5819°_{4\,1/2}-32197_{4\,1/2}$	−7
3781.102	20	*MB*	26439.806	$5118°_{2\,1/2}-31558_{3\,1/2}$	−13	3789.925	2	*MB*	26378.255	$14097_{3\,1/2}-40475°_{3\,1/2}$	25
3781.260	15	*MB*	26438.701			3790.102	2	*MB*	26377.023		
3781.446	15	*MB*	26437.401	$10641°_{2\,1/2}-37078_{1\,1/2}$	−35	3790.339	20	*MB*	26375.374	$5942°_{3\,1/2}-32318_{3\,1/2}$	−2
3781.616	500	*MB*	26436.213	$4266°_{3\,1/2}-30702_{4\,1/2}$	0	3790.826	10	*MB*	26371.986		
3781.715	12	*MB*	26435.521			3790.882	50	*MB*	26371.596	$7202°_{2\,1/2}-33574_{1\,1/2}$	−19
3781.743	10	*MB*	26435.325	$11759_{5\,1/2}-38194°_{4\,1/2}$	64	3791.007	15	*MB*	26370.727	$4266°_{3\,1/2}-30637_{2\,1/2}$	−32
				$4201°_{1\,1/2}-30637_{2\,1/2}$	61	3791.103	20	*MB*	26370.059		
3781.978	30	*MB*	26433.682	$2595°_{1\,1/2}-29029_{1\,1/2}$	−26	3791.221	20	*MB*	26369.238	$4459°_{3\,1/2}-30829_{3\,1/2}$	−13
3782.038	30	*MB*	26433.263	$4737°_{2\,1/2}-31170_{1\,1/2}$	−8	3791.381	2	*MB*	26368.126		
3782.358	12	*MB*	26431.027	$3363°_{2\,1/2}-29794_{3\,1/2}$	−62	3791.682	70	*MB*	26366.032	$7293°_{6\,1/2}-33659_{5\,1/2}$	3
3782.524	360	*MB*	26429.867	$3995°_{3\,1/2}-30425_{2\,1/2}$	−21	3792.110	2	*MB*	26363.057		
3782.758	2	*MB*	26428.232	$10088°_{1\,1/2}-36516_{1\,1/2}$	74	3792.320	240	*MB*	26361.597	$3703°_{3\,1/2}-30065_{3\,1/2}$	27
3783.031	80	*MB*	26426.325	$7233°_{5\,1/2}-33659_{5\,1/2}$	−15	3792.486	15	*MB*	26360.443	$9198°_{3\,1/2}-35558_{3\,1/2}$	67
3783.069	1	*MB*	26426.059	$12466°_{1\,1/2}-38892_{0\,1/2}$	−11	3792.752	20	*MB*	26358.594	$9778°_{2\,1/2}-36137_{2\,1/2}$	−23
3783.296	10	*MB*	26424.473			3792.805	30	*MB*	26358.226	$5010°_{2\,1/2}-31369_{2\,1/2}$	3
3783.431	30	*MB*	26423.531	$1873°_{3\,1/2}-28297_{3\,1/2}$	−7	3792.966	2	*MB*	26357.107		
3783.579	160	*MB*	26422.497	$5716°_{3\,1/2}-32138_{2\,1/2}$	15	3793.110	5	*MB*	26356.107		
3783.729	35	*MB*	26421.450			3793.421	50	*MB*	26353.946	$7522°_{0\,1/2}-33876_{1\,1/2}$	27
3783.854	20	*MB*	26420.577			3793.513	80	*MB*	26353.307	$5964°_{3\,1/2}-32318_{3\,1/2}$	28
3783.952	1	*MB*	26419.893	$7746°_{2\,1/2}-34166_{1\,1/2}$	39	3793.867	35b	*MB*	26350.848	$7059°_{4\,1/2}-33409_{3\,1/2}$	23
3784.168	20	*MB*	26418.385			3793.980	7	*MB*	26350.063	$7202°_{2\,1/2}-33552_{2\,1/2}$	10
3784.252	5	*MB*	26417.798			3794.212	25	*MB*	26348.452	$2382°_{4\,1/2}-28730_{3\,1/2}$	−13
3784.350	25	*MB*	26417.114	$7878°_{3\,1/2}-34295_{4\,1/2}$	−7	3794.294	15	*MB*	26347.882	$7818°_{1\,1/2}-34166_{1\,1/2}$	−9
3784.593	15	*MB*	26415.418			3794.471	5	*MB*	26346.653		
3784.786	5	*MB*	26414.071	$5437°_{3\,1/2}-31851_{2\,1/2}$	96	3794.529	2	*MB*	26346.251		
3785.116	5	*MB*	26411.768			3794.569	2	*MB*	26345.973		
3785.286	1	*MB*	26410.582	$8402°_{3\,1/2}-34813_{2\,1/2}$	48	3794.680	80	*MB*	26345.202	$6517°_{2\,1/2}-32862_{3\,1/2}$	54
3785.392	10	*MB*	26409.843			3795.011	150	*MB*	26342.905	$2382°_{4\,1/2}-28725_{4\,1/2}$	3
3785.824	2	*MB*	26406.829			3795.076	20	*MB*	26342.453		
3785.856	5	*MB*	26406.606			3795.190	1	*MB*	26341.662	$7818°_{1\,1/2}-34159_{0\,1/2}$	−67
3785.980	2	*MB*	26405.741			3795.246	140	*MB*	26341.274	$3793°_{6\,1/2}-30134_{5\,1/2}$	−1
3786.536	25	*MB*	26401.864	$10114°_{2\,1/2}-36516_{1\,1/2}$	−50	3795.472	2	*MB*	26339.705		
3786.628	700	*MB*	26401.222	$1410°_{4\,1/2}-27811_{3\,1/2}$	30	3795.571	50	*MB*	26339.018	$6521°_{1\,1/2}-32860_{0\,1/2}$	−2
3786.789	5	*MB*	26400.100			3795.767	10	*MB*	26337.658		
3787.460	30	*MB*	26395.423	$11742°_{5\,1/2}-38137_{5\,1/2}$	−13	3795.802	5	*MB*	26337.415		
3787.567	80	*MB*	26394.677	$2634°_{2\,1/2}-29029_{1\,1/2}$	−9	3795.927	5	*MB*	26336.548		
3787.905	100	*MB*	26392.322	$987°_{4\,1/2}-27379_{5\,1/2}$	−15	3795.985	7	*MB*	26336.145		
3788.204	35	*MB*	26390.239	$5924°_{1\,1/2}-32314_{0\,1/2}$	−25	3796.214	5	*MB*	26334.557	$11007°_{1\,1/2}-37342_{2\,1/2}$	29
				$4844°_{1\,1/2}-31234_{2\,1/2}$	4	3796.436	12	*MB*	26333.017	$9778°_{2\,1/2}-36112_{3\,1/2}$	−17
3788.430	30	*MB*	26388.664	$9723°_{4\,1/2}-36112_{3\,1/2}$	−21	3796.675	40	*MB*	26331.359	$7713°_{4\,1/2}-34044_{4\,1/2}$	8
3788.609	2	*MB*	26387.418			3797.127	5	*MB*	26328.225		
3788.656	12	*MB*	26387.090			3797.324	20	*MB*	26326.859	$14963°_{5\,1/2}-41289_{5\,1/2}$	−11
3788.745	420	*MB*	26386.471	$3793°_{6\,1/2}-30180_{6\,1/2}$	9	3797.404	10	*MB*	26326.304	$11325°_{2\,1/2}-37652_{2\,1/2}$	−5
3788.824	25	*MB*	26385.920			3797.451	2	*MB*	26325.979	$4844°_{1\,1/2}-31170_{1\,1/2}$	−21
3789.118	3	*MB*	26383.873	$19481_{4\,1/2}-45864°_{5\,1/2}$	−36	3797.604	10	*MB*	26324.918		
3789.183	2	*MB*	26383.421			3797.649	7	*MB*	26324.606		
3789.257	7	*MB*	26382.905	$13012°_{2\,1/2}-39394_{3\,1/2}$	8	3797.801	10	*MB*	26323.553		
3789.376	7	*MB*	26382.077			3797.932	3	*MB*	26322.645	$13515°_{3\,1/2}-39838_{2\,1/2}$	53
3789.598	5	*MB*	26380.531			3798.031	25	*MB*	26321.959		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3798.209	10	*MB*	26320.725			3807.860	5	*MB*	26254.017		
3798.279	7	*MB*	26320.240			3807.976	1	*MB*	26253.217		
3798.322	10	*MB*	26319.942			3808.032	10	*MB*	26252.831	$8774_{4\,1/2}-35026^{\circ}{}_{4\,1/2}$	−48
3798.550	7	*MB*	26318.362			3808.110	850	*MB*	26252.293	$10641^{\circ}{}_{2\,1/2}-36893_{3\,1/2}$	−34
3798.619	5	*MB*	26317.884	$4511^{\circ}{}_{2\,1/2}-30829_{3\,1/2}$	17					$2382^{\circ}{}_{4\,1/2}-28634_{5\,1/2}$	24
3798.822	20	*MB*	26316.478			3808.383	40	*MB*	26250.412	$3995^{\circ}{}_{3\,1/2}-30245_{4\,1/2}$	−5
3799.035	80	*MB*	26315.002	$3593^{\circ}{}_{4\,1/2}-29908_{4\,1/2}$	−19	3808.649	25	*MB*	26248.578	$3745^{\circ}{}_{1\,1/2}-29994_{2\,1/2}$	12
3799.341	10	*MB*	26312.883	$6549^{\circ}{}_{2\,1/2}-32862_{3\,1/2}$	24	3808.773	2	*MB*	26247.724		
3799.543	20	*MB*	26311.484	$11340^{\circ}{}_{3\,1/2}-37652_{2\,1/2}$	−8	3808.908	10	*MB*	26246.793		
3799.619	5	*MB*	26310.958			3809.214	400	*MB*	26244.685	$4910^{\circ}{}_{5\,1/2}-31155_{6\,1/2}$	25
3799.899	10	*MB*	26309.019			3809.496	60	*MB*	26242.742	$4459^{\circ}{}_{3\,1/2}-30702_{4\,1/2}$	5
3799.939	1	*MB*	26308.742	$9316_{3\,1/2}-35625^{\circ}{}_{3\,1/2}$	−45	3809.771	5	*MB*	26240.848		
3800.164	10	*MB*	26307.185			3810.023	7	*MB*	26239.112		
3800.203	5	*MB*	26306.915			3810.099	30	*MB*	26238.589	$3745^{\circ}{}_{1\,1/2}-29984_{1\,1/2}$	12
3800.326	100	*MB*	26306.063	$4523^{\circ}{}_{4\,1/2}-30829_{3\,1/2}$	−27	3810.226	25	*MB*	26237.715	$7059^{\circ}{}_{4\,1/2}-33296_{4\,1/2}$	−17
3800.372	75	*MB*	26305.745	$4737^{\circ}{}_{2\,1/2}-31043_{2\,1/2}$	8	3810.262	20	*MB*	26237.467	$7293^{\circ}{}_{6\,1/2}-33531_{6\,1/2}$	17
3800.491	5	*MB*	26304.921			3810.369	12	*MB*	26236.730		
3800.714	7	*MB*	26303.378			3810.568	5	*MB*	26235.360		
3800.743	12	*MB*	26303.177			3810.624	1	*MB*	26234.974		
3801.520	2000	*MB*	26297.801	$7233^{\circ}{}_{5\,1/2}-33531_{6\,1/2}$	40	3810.727	20	*MB*	26234.265		
3802.143	10	*MB*	26293.492	$7259^{\circ}{}_{3\,1/2}-33552_{2\,1/2}$	−14	3810.770	1	*MB*	26233.969	$4511^{\circ}{}_{2\,1/2}-30745_{1\,1/2}$	−59
3802.321	75	*MB*	26292.261	$25766^{\circ}{}_{4\,1/2}-52058_{4\,1/2}$	30	3810.895	80	*MB*	26233.109	$5964^{\circ}{}_{3\,1/2}-32197_{4\,1/2}$	23
3802.593	30	*MB*	26290.381	$3703^{\circ}{}_{3\,1/2}-29994_{2\,1/2}$	−65	3811.211	7	*MB*	26230.934	$7746^{\circ}{}_{2\,1/2}-33977_{3\,1/2}$	−20
3802.801	15	*MB*	26288.943	$7522^{\circ}{}_{5\,1/2}-33811_{4\,1/2}$	−2	3811.405	7	*MB*	26229.599	$17851^{\circ}{}_{0\,1/2}-44081_{1\,1/2}$	24
3803.086	650	*MB*	26286.973	$2879^{\circ}{}_{5\,1/2}-29166_{4\,1/2}$	71	3811.495	25	*MB*	26228.979	$5969^{\circ}{}_{5\,1/2}-32197_{4\,1/2}$	5
3803.261	5	*MB*	26285.763			3811.595	50	*MB*	26228.291	$11742^{\circ}{}_{5\,1/2}-37970_{5\,1/2}$	4
3803.327	7	*MB*	26285.307			3811.790	5	*MB*	26226.949		
3803.431	20	*MB*	26284.588			3812.149	20	*MB*	26224.479	$6638^{\circ}{}_{4\,1/2}-32862_{3\,1/2}$	−29
3803.620	10	*MB*	26283.282			3812.204	200	*MB*	26224.101	$4737^{\circ}{}_{2\,1/2}-30961_{1\,1/2}$	−43
3803.836	40b	*MB*	26281.790	$12260^{\circ}{}_{3\,1/2}-38541_{4\,1/2}$	5	3812.222	2	*MB*	26223.977	$5010^{\circ}{}_{2\,1/2}-31234_{2\,1/2}$	−31
				$3508^{\circ}{}_{0\,1/2}-29790_{0\,1/2}$	−9						
						3812.296	15	*MB*	26223.468	$4201^{\circ}{}_{1\,1/2}-30425_{2\,1/2}$	13
3804.046	15	*MB*	26280.339	$10798^{\circ}{}_{2\,1/2}-37078_{1\,1/2}$	15	3812.554	10	*MB*	26221.694		
3804.156	40	*MB*	26279.579	$5651^{\circ}{}_{5\,1/2}-31930_{4\,1/2}$	0	3812.592	20	*MB*	26221.432	$5716^{\circ}{}_{3\,1/2}-31937_{3\,1/2}$	−4
3804.537	1	*MB*	26276.947	$7878^{\circ}{}_{3\,1/2}-34155_{3\,1/2}$	−35	3812.647	2	*MB*	26221.054		
3804.695	12	*MB*	26275.856			3812.689	7	*MB*	26220.765		
3804.755	5	*MB*	26275.442			3812.879	2	*MB*	26219.459		
3804.909	5	*MB*	26274.379			3812.958	4	*MT*	26218.916		
3804.999	12	*MB*	26273.757	$7278^{\circ}{}_{1\,1/2}-33552_{2\,1/2}$	97	3813.310	5	*MB*	26216.496		
3805.357	20	*MB*	26271.285	$10924^{\circ}{}_{4\,1/2}-37196_{4\,1/2}$	23	3813.387	2	*MB*	26215.966		
3805.732	5	*MB*	26268.697			3813.570	50	*MB*	26214.708	$5716^{\circ}{}_{3\,1/2}-31930_{4\,1/2}$	−11
3805.901	20	*MB*	26267.530			3813.598	10	*MB*	26214.516	$5924^{\circ}{}_{1\,1/2}-32138_{2\,1/2}$	22
3806.364	20	*MB*	26264.335	$11387^{\circ}{}_{3\,1/2}-37652_{2\,1/2}$	−24	3813.678	12	*MB*	26213.966		
3806.408	15	*MB*	26264.031	$7713^{\circ}{}_{4\,1/2}-33977_{3\,1/2}$	−19	3813.739	7	*MB*	26213.546		
3806.716	25	*MB*	26261.907	$5675^{\circ}{}_{4\,1/2}-31937_{3\,1/2}$	17	3813.848	7	*MB*	26212.797		
3806.918	5	*MB*	26260.513			3814.118	10	*MB*	26210.942		
						3814.486	25	*MB*	26208.413		
3807.241	12	*MB*	26258.285			3814.639	25	*MB*	26207.362	$7202^{\circ}{}_{2\,1/2}-33409_{3\,1/2}$	−5
3807.324	12	*MB*	26257.713			3814.670	1	*MB*	26207.149		
3807.521	1	*MB*	26256.354	$8169^{\circ}{}_{1\,1/2}-34426_{2\,1/2}$	16	3814.940	30	*MB*	26205.294	$3703^{\circ}{}_{3\,1/2}-29908_{4\,1/2}$	−15
3807.689	100	*MB*	26255.196	$5942^{\circ}{}_{3\,1/2}-32197_{4\,1/2}$	12	3815.007	70	*MB*	26204.834	$11325^{\circ}{}_{2\,1/2}-37530_{1\,1/2}$	−17
				$5675^{\circ}{}_{4\,1/2}-31930_{4\,1/2}$	23					$2140^{\circ}{}_{0\,1/2}-28345_{0\,1/2}$	10

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
						3823.941	12	*MB*	26143.612		
3815.295	1	*MB*	26202.856	$10641°_{2\,1/2}-36844_{2\,1/2}$	−6	3823.978	10	*MB*	26143.359		
3815.367	20	*MB*	26202.362	$9723°_{4\,1/2}-35925_{3\,1/2}$	15	3824.105	25	*MB*	26142.491	$20554_{5\,1/2}-46697°_{4\,1/2}$	3
3815.610	20	*MB*	26200.693	$11387°_{3\,1/2}-37588_{3\,1/2}$	−48	3824.330	20	*MB*	26140.953		
				$3593°_{4\,1/2}-29794_{3\,1/2}$	58	3824.407	7	*MB*	26140.427		
3815.681	30	*MB*	26200.205			3824.586	12	*MB*	26139.203	$7454_{1\,1/2}-33594°_{2\,1/2}$	3
3815.794	400	*MB*	26199.429	$987°_{4\,1/2}-27187_{3\,1/2}$	−6	3824.856	50	*MB*	26137.358	$7522°_{5\,1/2}-33659_{5\,1/2}$	12
3815.841	80	*WA*	26199.107	$6517°_{2\,1/2}-32716_{2\,1/2}$	79	3825.848	20	*MB*	26130.581	$5437°_{3\,1/2}-31568_{4\,1/2}$	−15
3816.141	25	*MB*	26197.047	$5010°_{2\,1/2}-31207_{3\,1/2}$	−9	3825.990	5	*MB*	26129.611		
3816.309	40	*MB*	26195.894	$5942°_{3\,1/2}-32138_{2\,1/2}$	−5	3826.534	25	*MB*	26125.897	$4511°_{2\,1/2}-30637_{2\,1/2}$	−2
3816.395	15	*MB*	26195.304	$6521°_{1\,1/2}-32716_{2\,1/2}$	−10	3827.117	7	*MB*	26121.917		
3816.580	10	*MB*	26194.034			3827.218	80	*MB*	26121.228	$5437°_{3\,1/2}-31558_{3\,1/2}$	24
3816.677	2	*MB*	26193.368			3827.323	15	*MB*	26120.511	$6517°_{2\,1/2}-32638_{1\,1/2}$	−34
3817.289	12	*MB*	26189.169			3827.370	100	*MB*	26120.190	$14963°_{5\,1/2}-41083_{4\,1/2}$	−3
3817.365	4	*MB*	26188.648	$7818°_{1\,1/2}-34006_{0\,1/2}$	−26	3827.611	12	*MB*	26118.546	$5819°_{4\,1/2}-31937_{3\,1/2}$	6
3817.460	380	*MB*	26187.996	$4844°_{1\,1/2}-31032_{0\,1/2}$	29	3827.854	125	*MB*	26116.888	$4844°_{1\,1/2}-30961_{1\,1/2}$	14
3817.657	10	*MB*	26186.645			3827.906	1	*MB*	26116.533	$8804°_{4\,1/2}-34920_{3\,1/2}$	−30
3817.811	5	*MB*	26185.588			3827.973	50	*MB*	26116.076	$5118°_{2\,1/2}-31234_{2\,1/2}$	3
3817.866	12	*MB*	26185.211	$11949°_{3\,1/2}-38134_{4\,1/2}$	0	3828.080	2	*MB*	26115.346	$7061°_{0\,1/2}-33177_{0\,1/2}$	−11
3818.003	1	*MB*	26184.271	$16545_{5\,1/2}-42729°_{5\,1/2}$	94	3828.596	30	*MB*	26111.826	$5819°_{4\,1/2}-31930_{4\,1/2}$	4
3818.197	5	*MB*	26182.941	$15565°_{2\,1/2}-41748_{1\,1/2}$	82	3828.754	10	*MB*	26110.749	$8702°_{1\,1/2}-34813_{2\,1/2}$	−8
3818.250	10	*MB*	26182.578			3829.269	10	*MB*	26107.237		
3818.530	7	*MB*	26180.658			3829.596	10	*MB*	26105.008		
3818.584	7	*MB*	26180.288			3829.693	130	*MB*	26104.347	$1410°_{4\,1/2}-27514_{3\,1/2}$	−8
3818.685	80	*MB*	26179.595	$4523°_{4\,1/2}-30702_{4\,1/2}$	19	3829.820	20	*MB*	26103.481	$3703°_{3\,1/2}-29807_{3\,1/2}$	−2
3819.019	240	*MB*	26177.306	$4459°_{3\,1/2}-30637_{2\,1/2}$	21	3829.944	75	*MB*	26102.636	$4322°_{2\,1/2}-30425_{2\,1/2}$	−4
3819.196	50	*MB*	26176.092	$12365°_{4\,1/2}-38541_{4\,1/2}$	26	3830.024	140	*MB*	26102.091	$6389°_{4\,1/2}-32492_{5\,1/2}$	−4
3819.528	20	*MB*	26173.817	$5964°_{3\,1/2}-32138_{2\,1/2}$	16	3830.294	7	*MB*	26100.251		
3819.821	5	*MB*	26171.810			3830.551	380	*MB*	26098.500	$7713°_{4\,1/2}-33811_{4\,1/2}$	22
3819.996	30	*MB*	26170.611	$3995°_{3\,1/2}-30166_{3\,1/2}$	14	3830.710	7	*MB*	26097.417	$12097_{3\,1/2}-38194°_{4\,1/2}$	−34
3820.429	20	*MB*	26167.645			3830.909	125	*MB*	26096.061	$2634°_{2\,1/2}-28730_{3\,1/2}$	15
3820.546	5	*MB*	26166.843	$10035°_{5\,1/2}-36202_{4\,1/2}$	−2	3831.075	400	*MB*	26094.930	$3854_{3\,1/2}-29948°_{2\,1/2}$	29
3820.649	25	*MB*	26166.138	$7878°_{3\,1/2}-34044_{4\,1/2}$	25	3831.316	7	*MB*	26093.289		
3820.865	50	*MB*	26164.659	$4910°_{5\,1/2}-31075_{4\,1/2}$	19	3831.546	100	*MB*	26091.723	$4737°_{2\,1/2}-30829_{3\,1/2}$	−27
3820.970	1	*MB*	26163.940	$6638°_{4\,1/2}-32802_{5\,1/2}$	33	3831.600	20	*MB*	26091.355		
3821.064	15	*MB*	26163.296			3831.662	75	*MB*	26090.933	$3703°_{3\,1/2}-29794_{3\,1/2}$	10
3821.260	140	*MB*	26161.954	$2563°_{5\,1/2}-28725_{4\,1/2}$	39	3831.781	75	*MB*	26090.123	$2595°_{1\,1/2}-28685_{2\,1/2}$	9
3821.514	1	*MB*	26160.215	$17300°_{3\,1/2}-43460_{2\,1/2}$	−7	3831.926	75	*MB*	26089.135	$2641°_{3\,1/2}-28730_{3\,1/2}$	−17
3821.579	40	*MB*	26159.770	$5010°_{2\,1/2}-31170_{1\,1/2}$	−4					$5118°_{2\,1/2}-31207_{3\,1/2}$	15
3821.694	150	*MB*	26158.983	$4266°_{3\,1/2}-30425_{2\,1/2}$	32	3831.970	10	*MB*	26088.836	$14387_{4\,1/2}-40475°_{3\,1/2}$	23
3821.947	15	*MB*	26157.252	$8175°_{2\,1/2}-34333_{2\,1/2}$	17	3832.053	60	*MB*	26088.271	$6549°_{2\,1/2}-32638_{1\,1/2}$	14
3822.015	2	*MB*	26156.786			3832.222	90	*MB*	26087.120	$5651°_{5\,1/2}-31738_{5\,1/2}$	−6
3822.059	2	*MB*	26156.485			3832.332	40	*MB*	26086.371	$3363°_{2\,1/2}-29449_{1\,1/2}$	21
3822.437	15	*MB*	26153.899			3832.648	30	*MB*	26084.221	$9723°_{4\,1/2}-35807_{4\,1/2}$	−11
3822.890	15	*MB*	26150.800	$7259°_{3\,1/2}-33409_{3\,1/2}$	−21	3832.743	80	*MB*	26083.574	$2641°_{3\,1/2}-28725_{4\,1/2}$	−14
3823.091	10	*MB*	26149.425	$2581°_{4\,1/2}-28730_{3\,1/2}$	−29	3833.053	5	*MB*	26081.465		
3823.328	12	*MB*	26147.804			3833.119	2	*MB*	26081.016		
3823.492	25	*MB*	26146.682	$9778°_{2\,1/2}-35925_{3\,1/2}$	−13	3833.308	7	*MB*	26079.730	$13758°_{1\,1/2}-39838_{2\,1/2}$	−44
3823.695	120b	*MB*	26145.294			3833.546	5	*MB*	26078.111		
3823.895	380	*MB*	26143.927	$2581°_{4\,1/2}-28725_{4\,1/2}$	36	3834.009	2	*MB*	26074.962		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3834.249	12	*MB*	26073.329			3842.305	12	*MB*	26018.664		
3834.400	20	*MB*	26072.303			3842.368	7	*MB*	26018.237		
3834.549	400	*MB*	26071.290	$2563°_{5\,1/2}-28634_{5\,1/2}$	7	3842.486	2	*MB*	26017.438		
3834.659	12	*MB*	26070.542	$13784°_{1\,1/2}-39855_{0\,1/2}$	−22	3842.620	5	*MB*	26016.531	$11325°_{2\,1/2}-37342_{2\,1/2}$	−14
3834.780	70	*MB*	26069.719	$3995°_{3\,1/2}-30065_{3\,1/2}$	15	3843.001	5	*MB*	26013.952		
3835.084	5	*MB*	26067.653			3843.275	5	*MB*	26012.097		
3835.533	10	*MB*	26064.601			3843.444	25	*MB*	26010.953		
3835.561	7	*MB*	26064.411			3843.643	10	*MB*	26009.607		
3835.746	40	*MB*	26063.154	$7233°_{5\,1/2}-33296_{4\,1/2}$	−23	3843.762	160	*MB*	26008.801	$7522°_{5\,1/2}-33531_{6\,1/2}$	35
3835.835	30	*MB*	26062.549	$10454°_{1\,1/2}-36516_{1\,1/2}$	23	3843.897	10	*MB*	26007.888	$4737°_{2\,1/2}-30745_{1\,1/2}$	−24
3835.893	40	*MB*	26062.155	$7746°_{2\,1/2}-33808_{2\,1/2}$	23	3843.935	5	*MB*	26007.631		
3835.960	20	*MB*	26061.700			3844.019	5	*MB*	26007.063		
3836.104	220	*MB*	26060.722	$1873°_{3\,1/2}-27934_{4\,1/2}$	18	3844.221	15	*MB*	26005.696		
3836.156	10	*MB*	26060.368			3844.571	15	*MB*	26003.329		
3836.211	12	*MB*	26059.995			3844.797	15	*MB*	26001.800	$11340°_{3\,1/2}-37342_{2\,1/2}$	72
3836.303	2	*MB*	26059.370			3844.854	20	*MB*	26001.415	$8927°_{5\,1/2}-34928_{4\,1/2}$	−39
3836.419	7	*MB*	26058.582			3844.868	7	*MB*	26001.320	$3363°_{2\,1/2}-29364_{3\,1/2}$	7
3836.553	12	*MB*	26057.672			3844.944	5	*MB*	26000.806		
3836.971	17	*MB*	26054.833			3845.231	5	*MB*	25998.866	$10924°_{4\,1/2}-36923_{4\,1/2}$	−46
3837.203	90	*MB*	26053.258	$2581°_{4\,1/2}-28634_{5\,1/2}$	0	3845.276	50	*MB*	25998.561	$3995°_{3\,1/2}-29994_{2\,1/2}$	−19
3837.426	5	*MB*	26051.744	$7522°_{0\,1/2}-33574_{1\,1/2}$	57	3845.484	80	*MB*	25997.155	$10114°_{2\,1/2}-36112_{3\,1/2}$	17
3837.527	30	*MB*	26051.058	$2634°_{2\,1/2}-28685_{2\,1/2}$	−33	3845.602	7	*MB*	25996.357	$8169°_{1\,1/2}-34166_{1\,1/2}$	17
3837.841	7	*MB*	26048.927	$10088°_{1\,1/2}-36137_{2\,1/2}$	−36	3845.695	10	*MB*	25995.729		
3838.153	15	*MB*	26046.809	$12762°_{4\,1/2}-38809_{3\,1/2}$	−25	3845.828	15	*MB*	25994.830	$5942°_{3\,1/2}-31937_{3\,1/2}$	−24
3838.309	10	*MB*	26045.751	$10798°_{2\,1/2}-36844_{2\,1/2}$	1	3846.003	25	*MB*	25993.647		
3838.462	3	*MB*	26044.713	$3745°_{1\,1/2}-29790_{0\,1/2}$	−81	3846.140	25	*MB*	25992.721	$9723°_{4\,1/2}-35716_{5\,1/2}$	−26
3838.535	900	*MB*	26044.217	$2641°_{3\,1/2}-28685_{2\,1/2}$	19	3846.515	180	*MB*	25990.187	$8169°_{1\,1/2}-34159_{0\,1/2}$	8
3838.992	20	*MB*	26041.117							$8175°_{2\,1/2}-34166_{1\,1/2}$	11
3839.191	12	*MB*	26039.767							$7818°_{1\,1/2}-33808_{2\,1/2}$	17
3839.338	7	*MB*	26038.770			3846.565	25	*MB*	25989.849	$6517°_{2\,1/2}-32507_{1\,1/2}$	27
3839.491	100	*MB*	26037.733	$7259°_{3\,1/2}-33296_{4\,1/2}$	3	3846.777	40	*MB*	25988.417	$7061°_{0\,1/2}-33050_{1\,1/2}$	−35
3839.640	2	*MB*	26036.722			3846.821	40	*MB*	25988.120	$5942°_{3\,1/2}-31930_{4\,1/2}$	−17
3839.659	7	*MB*	26036.594			3846.966	40	*MB*	25987.140		
3839.710	2	*MB*	26036.248			3847.054	15	*MB*	25986.546		
3839.865	7	*MB*	26035.197			3847.120	3	*WA*	25986.100	$6521°_{1\,1/2}-32507_{1\,1/2}$	−9
3839.985	2	*MB*	26034.383			3847.310	7	*MB*	25984.817		
3840.041	2	*MB*	26034.003			3847.579	2	*MB*	25983.000		
3840.303	15	*MB*	26032.227	$5010°_{2\,1/2}-31043_{2\,1/2}$	−12	3847.798	7	*MB*	25981.521		
3840.377	20	*MB*	26031.726			3848.097	200	*MB*	25979.502	$4266°_{3\,1/2}-30245_{4\,1/2}$	22
3840.452	25	*MB*	26031.218	$1873°_{3\,1/2}-27905_{4\,1/2}$	−4	3848.407	20	*MB*	25977.410	$7011_{4\,1/2}-32989°_{3\,1/2}$	−3
3840.513	10	*MB*	26030.804			3848.452	12	*MB*	25977.106	$23640_{4\,1/2}-49617°_{5\,1/2}$	−30
3840.747	4	*WA*	26029.218	$14481°_{2\,1/2}-40511_{1\,1/2}$	21	3848.595	700	*MB*	25976.141	$4203°_{6\,1/2}-30180_{6\,1/2}$	−20
3840.847	10	*MB*	26028.540	$7011_{4\,1/2}-33040°_{4\,1/2}$	−8	3849.020	7	*MB*	25973.273	$9053_{3\,1/2}-35026°_{4\,1/2}$	−41
3841.025	75	*MB*	26027.334	$9198°_{3\,1/2}-35225_{2\,1/2}$	4	3849.057	30	*MB*	25973.023		
3841.076	7	*MB*	26026.989			3849.096	20	*MB*	25972.760	$5964°_{3\,1/2}-31937_{3\,1/2}$	3
3841.436	15	*MB*	26024.550	$11949°_{3\,1/2}-37973_{3\,1/2}$	−36	3849.395	5	*MB*	25970.742		
3841.611	60	*MB*	26023.364	$6389°_{4\,1/2}-32413_{3\,1/2}$	−39	3849.484	80	*MB*	25970.142	$3703°_{3\,1/2}-29673_{2\,1/2}$	−33
				$8402°_{3\,1/2}-34426_{2\,1/2}$	−4	3849.559	50	*MB*	25969.636	$1410°_{4\,1/2}-27379_{5\,1/2}$	−8
3841.707	100	*MB*	26022.714	$10114°_{2\,1/2}-36137_{2\,1/2}$	−6	3849.662	50	*MB*	25968.941	$10924°_{4\,1/2}-36893_{3\,1/2}$	48
3842.043	40	*MB*	26020.438	$7059°_{4\,1/2}-33079_{3\,1/2}$	−1	3849.975	7	*MB*	25966.830		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3850.097	60	*MB*	25966.007	$5964°_{3\,1/2}-31930_{4\,1/2}$	−32	3859.478	2	*MB*	25902.895		
3850.125	40	*MB*	25965.819	$9491°_{0\,1/2}-35457_{1\,1/2}$	−5	3859.611	5	*MB*	25902.002		
3850.175	12	*MB*	25965.481	$4459°_{3\,1/2}-30425_{2\,1/2}$	4	3859.943	40	*MB*	25899.774	$4737°_{2\,1/2}-30637_{2\,1/2}$	−9
3850.306	10	*MB*	25964.598			3860.167	35	*MB*	25898.271	$7278°_{1\,1/2}-33177_{0\,1/2}$	−2
3850.359	2	*MB*	25964.241			3860.402	100	*MB*	25896.695	$6967_{6\,1/2}-32864°_{5\,1/2}$	−35
3850.705	25	*MB*	25961.908	$5969°_{5\,1/2}-31930_{4\,1/2}$	−20	3860.640	50	*MB*	25895.099	$14963°_{5\,1/2}-40858_{4\,1/2}$	−5
3850.783	50	*MB*	25961.382	$13117_{4\,1/2}-39079°_{5\,1/2}$	6	3860.988	50	*MB*	25892.765	$8402°_{3\,1/2}-34295_{4\,1/2}$	−16
3850.985	10	*MB*	25960.020			3861.065	7	*MB*	25892.248	$5675°_{4\,1/2}-31568_{4\,1/2}$	−7
3851.271	25	*MB*	25958.092			3861.205	5	*MB*	25891.309		
3851.352	35	*MB*	25957.546	$6549°_{2\,1/2}-32507_{1\,1/2}$	12	3861.266	7	*MB*	25890.900		
3851.430	2	*MB*	25957.020			3861.482	25	*MB*	25889.452	$7259°_{3\,1/2}-33148_{2\,1/2}$	−61
3851.793	7	*MB*	25954.574	$11387°_{3\,1/2}-37342_{2\,1/2}$	−21	3861.584	20	*MB*	25888.768	$6913°_{6\,1/2}-32802_{5\,1/2}$	−4
3852.097	80	*MB*	25952.526	$2382°_{4\,1/2}-28334_{4\,1/2}$	16	3861.762	7	*MB*	25887.575	$5283°_{0\,1/2}-31170_{1\,1/2}$	−40
3852.372	10	*MB*	25950.674	$5010°_{2\,1/2}-30961_{1\,1/2}$	26	3861.925	60	*MB*	25886.482	$5964°_{3\,1/2}-31851_{2\,1/2}$	−18
3852.590	5	*MB*	25949.205			3862.134	25	*MB*	25885.082	$8280°_{2\,1/2}-34166_{1\,1/2}$	−10
3852.675	5	*MB*	25948.633			3862.184	12	*MB*	25884.747		
3852.757	2	*MB*	25948.080	$7092_{5\,1/2}-33040°_{4\,1/2}$	−7	3862.463	160	*MB*	25882.877	$5675°_{4\,1/2}-31558_{3\,1/2}$	14
3852.939	20	*MB*	25946.855	$7713°_{4\,1/2}-33659_{5\,1/2}$	−23	3862.806	5	*MB*	25880.579		
3853.148	700	*MB*	25945.447	$0°_{3\,1/2}-25945_{3\,1/2}$	52	3863.017	1	*MB*	25879.165	$13515°_{3\,1/2}-39394_{3\,1/2}$	25
3853.523	5	*MB*	25942.923			3863.140	2	*MB*	25878.341		
3853.552	2	*MB*	25942.727			3863.234	20	*MB*	25877.711		
3854.187	1000	*MB*	25938.453	$1873°_{3\,1/2}-27812_{2\,1/2}$	−10	3863.589	40	*MB*	25875.334	$10641°_{2\,1/2}-36516_{1\,1/2}$	−21
3854.320	1000	*MB*	25937.558	$1873°_{3\,1/2}-27811_{3\,1/2}$	−3	3863.731	50	*MB*	25874.383	$8280°_{2\,1/2}-34155_{3\,1/2}$	18
3854.960	30	*MB*	25933.252	$18704_{5\,1/2}-44637°_{6\,1/2}$	17	3863.924	2	*MB*	25873.090		
				$7878°_{3\,1/2}-33811_{4\,1/2}$	13	3864.107	7	*MB*	25871.865	$7722_{2\,1/2}-33594°_{2\,1/2}$	−1
3855.199	40	*MB*	25931.645	$5437°_{3\,1/2}-31369_{2\,1/2}$	−25	3864.341	20	*MB*	25870.299		
3855.301	500	*MB*	25930.959	$4203°_{6\,1/2}-30134_{5\,1/2}$	−16	3864.438	15	*MB*	25869.649	$7278°_{1\,1/2}-33148_{2\,1/2}$	−17
3855.859	10	*MB*	25927.206	$5924°_{1\,1/2}-31851_{2\,1/2}$	13	3864.776	20	*MB*	25867.387		
3855.934	10	*MB*	25926.702			3864.936	2	*MB*	25866.316		
3856.083	2	*MB*	25925.700	$13012°_{2\,1/2}-38937_{1\,1/2}$	−20	3865.151	12	*MB*	25864.877		
3856.289	20	*MB*	25924.315	$5118°_{2\,1/2}-31043_{2\,1/2}$	11	3865.621	12	*MB*	25861.733		
3856.358	5	*MB*	25923.851			3865.839	5	*MB*	25860.274		
3856.430	2	*MB*	25923.367			3866.188	2	*MB*	25857.940		
3856.708	2	*MB*	25921.499			3866.415	15	*MB*	25856.422		
3856.870	2	*MB*	25920.410			3866.547	7	*MB*	25855.539	$11340°_{3\,1/2}-37196_{4\,1/2}$	−1
3857.024	320	*MB*	25919.375	$5819°_{4\,1/2}-31738_{5\,1/2}$	4	3866.809	130	*MB*	25853.787	$987°_{4\,1/2}-26841_{4\,1/2}$	14
3857.237	140	*MB*	25917.944	$3363°_{2\,1/2}-29281_{2\,1/2}$	−2	3866.904	3	*MB*	25853.152		
3857.426	12	*MB*	25916.674	$12057°_{2\,1/2}-37973_{3\,1/2}$	5	3866.993	1	*MB*	25852.557	$7011_{4\,1/2}-32864°_{5\,1/2}$	83
				$5651°_{5\,1/2}-31568_{4\,1/2}$	12	3867.107	25	*MB*	25851.795	$5716°_{3\,1/2}-31568_{4\,1/2}$	−7
3857.641	300	*MB*	25915.229	$2382°_{4\,1/2}-28297_{3\,1/2}$	3	3867.560	20	*MB*	25848.767		
3857.810	60	*MB*	25914.094	$4511°_{2\,1/2}-30425_{2\,1/2}$	2	3867.671	7	*MB*	25848.025		
3857.926	40	*MB*	25913.315	$20783_{5\,1/2}-46697°_{4\,1/2}$	23	3867.878	20	*MB*	25846.642		
3858.023	5	*MB*	25912.663	$987°_{4\,1/2}-26900_{3\,1/2}$	−79	3867.971	10	*MB*	25846.020		
3858.303	5	*MB*	25910.783			3868.061	25	*MB*	25845.419	$2879°_{5\,1/2}-28725_{4\,1/2}$	−33
3858.463	5	*MB*	25909.709			3868.131	160	*MB*	25844.951	$3593°_{4\,1/2}-29438_{5\,1/2}$	17
3858.631	5	*MB*	25908.581	$5942°_{3\,1/2}-31851_{2\,1/2}$	−17	3868.377	12	*MB*	25843.308	$4322°_{2\,1/2}-30166_{3\,1/2}$	−40
3858.733	2	*MB*	25907.896			3868.473	50	*MB*	25842.667	$5118°_{2\,1/2}-30961_{1\,1/2}$	−44
3858.862	7	*MB*	25907.030			3868.510	130	*MB*	25842.419	$5716°_{3\,1/2}-31558_{3\,1/2}$	10
3858.921	7	*MB*	25906.633	$11325°_{2\,1/2}-37232_{1\,1/2}$	−23	3868.590	15	*MB*	25841.885	$5924°_{1\,1/2}-31766_{1\,1/2}$	−19
3859.208	5	*MB*	25904.707			3868.937	5	*MB*	25839.567		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3869.121	5	*MB*	25838.339			3878.585	10	*MB*	25775.293		
3869.148	2	*MB*	25838.158			3878.750	25	*MB*	25774.196	$7522°_{5\,1/2}-33296_{4\,1/2}$	13
3869.319	20	*MB*	25837.016	$10274°_{3\,1/2}-36112_{3\,1/2}$	−33	3879.062	100	*MB*	25772.123	$15517°_{6\,1/2}-41289_{5\,1/2}$	−75
3869.393	7	*MB*	25836.522	$11007°_{1\,1/2}-36844_{2\,1/2}$	17	3879.101	25	*MB*	25771.864	$12365°_{4\,1/2}-38137_{5\,1/2}$	−11
3869.562	50	*MB*	25835.394	$9723°_{4\,1/2}-35558_{3\,1/2}$	27					$10035°_{5\,1/2}-35807_{4\,1/2}$	7
3869.713	10	*MB*	25834.386	$10454°_{1\,1/2}-36288_{0\,1/2}$	0	3879.178	30	*MB*	25771.353	$7278°_{1\,1/2}-33050_{1\,1/2}$	−15
3869.931	15	*MB*	25832.931			3879.263	25	*MB*	25770.788	$3593°_{4\,1/2}-29364_{3\,1/2}$	−69
3870.017	17	*MB*	25832.357	$10684°_{0\,1/2}-36516_{1\,1/2}$	0	3879.309	50	*MB*	25770.482	$5437°_{3\,1/2}-31207_{3\,1/2}$	−22
3870.176	15	*MB*	25831.295			3879.436	5	*MB*	25769.639		
3870.685	2	*MB*	25827.899	$7746°_{2\,1/2}-33574_{1\,1/2}$	−60	3879.465	12	*MB*	25769.446	$5969°_{5\,1/2}-31738_{5\,1/2}$	−30
3870.867	130	*MB*	25826.684	$5513_{5\,1/2}-31340°_{6\,1/2}$	0	3879.597	50	*MB*	25768.569	$12365°_{4\,1/2}-38134_{4\,1/2}$	−24
3871.332	15	*MB*	25823.582			3879.637	2	*MB*	25768.304	$6549°_{2\,1/2}-32318_{3\,1/2}$	37
3871.398	60	*MB*	25823.142	$9634°_{1\,1/2}-35457_{1\,1/2}$	10	3879.673	10	*MB*	25768.065		
3871.802	30	*MB*	25820.447	$7259°_{3\,1/2}-33079_{3\,1/2}$	11	3879.963	35	*MB*	25766.139	$7278°_{1\,1/2}-33045_{2\,1/2}$	−33
3872.128	30	*MB*	25818.274	$5010°_{2\,1/2}-30829_{3\,1/2}$	20	3880.103	7	*MB*	25765.209		
3872.449	7	*MB*	25816.134			3880.403	50	*MB*	25763.217	$14276_{5\,1/2}-40039°_{6\,1/2}$	−8
3872.501	10	*MB*	25815.787			3880.587	5	*MB*	25761.996		
3872.875	10	*MB*	25813.294	$7722_{2\,1/2}-33535°_{3\,1/2}$	−56	3880.730	1	*MB*	25761.046		
3873.129	30	*MB*	25811.601	$3995°_{3\,1/2}-29807_{3\,1/2}$	−16	3880.791	5	*MB*	25760.641		
3873.182	20	*MB*	25811.248	$12326°_{6\,1/2}-38137_{5\,1/2}$	−16	3880.876	5	*MB*	25760.077		
3873.249	50	*MB*	25810.801	$10114°_{2\,1/2}-35925_{3\,1/2}$	3	3881.064	2	*MB*	25758.830		
3873.374	2	*MB*	25809.968			3881.242	10	*MB*	25757.648		
3873.661	20	*MB*	25808.056	$6389°_{4\,1/2}-32197_{4\,1/2}$	17	3881.497	20	*MB*	25755.956	$7818°_{1\,1/2}-33574_{1\,1/2}$	−41
3873.838	2	*MB*	25806.877			3881.670	150	*MB*	25754.808	$2879°_{5\,1/2}-28634_{5\,1/2}$	−12
3873.876	2	*MB*	25806.624			3881.875	140	*MB*	25753.448	$2581°_{4\,1/2}-28334_{4\,1/2}$	−50
3873.910	5	*MB*	25806.398	$7746°_{2\,1/2}-33552_{2\,1/2}$	1	3882.004	10	*MB*	25752.592	$8402°_{3\,1/2}-34155_{3\,1/2}$	−50
3874.213	15	*MB*	25804.379	$20783_{5\,1/2}-46588°_{5\,1/2}$	40	3882.447	1200	*MB*	25749.654	$2595°_{1\,1/2}-28345_{0\,1/2}$	−17
3874.319	35	*MB*	25803.673	$7059°_{4\,1/2}-32862_{3\,1/2}$	−21	3882.561	40	*MB*	25748.898	$5819°_{4\,1/2}-31568_{4\,1/2}$	−7
3874.465	2	*MB*	25802.701			3882.695	10	*MB*	25748.009		
3874.580	20	*MB*	25801.935			3882.804	15	*MB*	25747.286	$12057°_{2\,1/2}-37804_{1\,1/2}$	−40
3874.677	220	*MB*	25801.289	$8175°_{2\,1/2}-33977_{3\,1/2}$	12	3882.968	5	*MB*	25746.199		
3875.007	110	*MB*	25799.092	$3995°_{3\,1/2}-29794_{3\,1/2}$	35	3883.140	5	*MB*	25745.059		
3875.056	110	*MB*	25798.766	$4266°_{3\,1/2}-30065_{3\,1/2}$	0	3883.226	2	*MB*	25744.488		
3875.092	2	*MB*	25798.526	$7061°_{0\,1/2}-32860_{0\,1/2}$	11	3883.255	10	*MB*	25744.296		
3875.253	75	*MB*	25797.454	$5437°_{3\,1/2}-31234_{2\,1/2}$	−2	3883.446	35	*MB*	25743.030	$7059°_{4\,1/2}-32802_{5\,1/2}$	−62
3875.358	5	*MB*	25796.755			3883.540	50	*MB*	25742.407	$4322°_{2\,1/2}-30065_{3\,1/2}$	−48
3875.596	7	*MB*	25795.171			3883.581	60	*MB*	25742.135	$2595°_{1\,1/2}-28337_{2\,1/2}$	−34
3875.903	50	*MB*	25793.128	$6521°_{1\,1/2}-32314_{0\,1/2}$	−8	3883.657	1	*MB*	25741.631		
3875.999	40	*MB*	25792.489	$4844°_{1\,1/2}-30637_{2\,1/2}$	−23	3883.811	12	*MB*	25740.611		
3876.125	140	*MB*	25791.651	$4910°_{5\,1/2}-30702_{4\,1/2}$	4	3883.984	35	*MB*	25739.464	$5819°_{4\,1/2}-31558_{3\,1/2}$	−48
3876.167	2	*MB*	25791.371	$17851°_{0\,1/2}-43643_{0\,1/2}$	−58	3884.209	80	*MB*	25737.973	$12456_{3\,1/2}-38194°_{4\,1/2}$	−8
3876.244	5	*MB*	25790.859			3884.340	20	*MB*	25737.105		
3876.288	7	*MB*	25790.566			3884.499	15	*MB*	25736.052	$9198°_{3\,1/2}-34934_{2\,1/2}$	−44
3876.365	60	*MB*	25790.054	$12751°_{5\,1/2}-38541_{4\,1/2}$	−36	3884.562	40	*MB*	25735.634	$13659°_{4\,1/2}-39394_{3\,1/2}$	−29
3876.971	500	*MB*	25786.023	$4459°_{3\,1/2}-30245_{4\,1/2}$	17	3884.749	40	*MB*	25734.396	$7818°_{1\,1/2}-33552_{2\,1/2}$	−38
										$5010°_{2\,1/2}-30745_{1\,1/2}$	−19
3877.555	35	*MB*	25782.139	$4201°_{1\,1/2}-29984_{1\,1/2}$	−19						
3877.777	2	*MB*	25780.663			3885.157	15	*MB*	25731.693		
3877.805	2	*MB*	25780.477			3885.302	1	*MB*	25730.733	$9198°_{3\,1/2}-34928_{4\,1/2}$	90
3877.984	2	*WA*	25779.287	$12762°_{4\,1/2}-38541_{4\,1/2}$	56	3885.399	25	*MB*	25730.090		
3878.358	900	*MB*	25776.801	$1410°_{4\,1/2}-27187_{3\,1/2}$	59	3885.539	30	*MB*	25729.164		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3885.611	25	*MB*	25728.687			3895.812	12	*MB*	25661.319	$4322°_{2\,1/2}-29984_{1\,1/2}$	−24
3885.707	30	*MB*	25728.051	$5616_{4\,1/2}-31344°_{3\,1/2}$	−37	3895.841	7	*MB*	25661.128	$3703°_{3\,1/2}-29364_{3\,1/2}$	−17
3885.773	40	*MB*	25727.614	$4266°_{3\,1/2}-29994_{2\,1/2}$	−29	3895.975	7	*MB*	25660.245	$7202°_{2\,1/2}-32862_{3\,1/2}$	8
3885.851	7	*MB*	25727.098	$4165_{4\,1/2}-29892°_{3\,1/2}$	−28	3896.023	5	*MB*	25659.929		
3886.283	5	*MB*	25724.238			3896.071	10	*MB*	25659.613		
3886.375	5	*MB*	25723.629	$8702°_{1\,1/2}-34426_{2\,1/2}$	36	3896.258	12	*MB*	25658.382		
3886.499	80	*MB*	25722.808	$4523°_{4\,1/2}-30245_{4\,1/2}$	−36	3896.639	40	*MB*	25655.873	$2641°_{3\,1/2}-28297_{3\,1/2}$	−40
3886.549	40	*MB*	25722.477	$9198°_{3\,1/2}-34920_{3\,1/2}$	16	3896.801	480	*MB*	25654.806	$4511°_{2\,1/2}-30166_{3\,1/2}$	7
3887.027	10	*MB*	25719.314			3896.914	15	*MB*	25654.062		
3887.336	12	*MB*	25717.270			3897.221	12	*MB*	25652.042		
3887.506	10	*MB*	25716.145	$2581°_{4\,1/2}-28297_{3\,1/2}$	−70	3897.311	15	*MB*	25651.449		
3887.665	12	*MB*	25715.094			3897.425	40	*MB*	25650.699	$10274°_{3\,1/2}-35925_{3\,1/2}$	−11
3887.856	7	*MB*	25713.830			3897.619	7	*MB*	25649.422		
3888.118	25	*MB*	25712.098			3898.267	400	*MB*	25645.159	$3793°_{6\,1/2}-29438_{5\,1/2}$	−23
3888.266	5	*MB*	25711.119			3898.426	10	*MB*	25644.118	$12326°_{6\,1/2}-37970_{5\,1/2}$	3
3888.363	40	*MB*	25710.478	$14963°_{5\,1/2}-40673_{5\,1/2}$	3	3898.598	20	*MB*	25642.981	$4523°_{4\,1/2}-30166_{3\,1/2}$	−42
3888.389	100	*MB*	25710.306	$5118°_{2\,1/2}-30829_{3\,1/2}$	−11	3898.675	35	*MB*	25642.475	$4266°_{3\,1/2}-29908_{4\,1/2}$	−31
3888.516	7	*MB*	25709.466			3898.790	2	*MB*	25641.719	$8402°_{3\,1/2}-34044_{4\,1/2}$	−53
3888.935	20	*MB*	25706.696	$8169°_{1\,1/2}-33876_{1\,1/2}$	17	3898.944	220	*MB*	25640.706	$1873°_{3\,1/2}-27514_{3\,1/2}$	−19
3888.998	100	*MB*	25706.280	$9491°_{0\,1/2}-35197_{1\,1/2}$	−66	3899.081	2	*MB*	25639.805		
3889.302	60	*MB*	25704.270	$3745°_{1\,1/2}-29449_{1\,1/2}$	−32	3899.161	20	*MB*	25639.279	$11949°_{3\,1/2}-37588_{3\,1/2}$	−4
3889.478	60	*MB*	25703.107	$2634°_{2\,1/2}-28337_{2\,1/2}$	−40	3899.266	25	*MB*	25638.588	$8169°_{1\,1/2}-33808_{2\,1/2}$	−30
3889.795	30	*MB*	25701.013			3899.326	12	*MB*	25638.194	$5437°_{3\,1/2}-31075_{4\,1/2}$	13
3889.984	850	*MB*	25699.764	$5455°_{7\,1/2}-31155_{6\,1/2}$	−13	3899.381	40	*MB*	25637.832	$5513_{5\,1/2}-31151°_{5\,1/2}$	8
3890.439	50	*MB*	25696.758	$7713°_{4\,1/2}-33409_{3\,1/2}$	−49	3899.758	7	*MB*	25635.354		
3890.522	50	*MB*	25696.210	$8280°_{2\,1/2}-33977_{3\,1/2}$	16	3899.979	5	*MB*	25633.901		
				$2641°_{3\,1/2}-28337_{2\,1/2}$	−44	3900.202	60	*MB*	25632.436	$8175°_{2\,1/2}-33808_{2\,1/2}$	−17
3890.746	170	*MB*	25694.731	$2140°_{0\,1/2}-27835_{1\,1/2}$	−9	3900.482	1	*MB*	25630.596	$8702°_{1\,1/2}-34333_{2\,1/2}$	−57
3890.980	170	*MB*	25693.186	$2641°_{3\,1/2}-28334_{4\,1/2}$	−10	3900.565	12	*MB*	25630.050	$8278_{5\,1/2}-33908°_{4\,1/2}$	−88
3891.250	15	*MB*	25691.403			3900.623	10	*MB*	25629.669		
3891.511	7	*MB*	25689.680			3900.665	20	*MB*	25629.393		
3891.772	40	*MB*	25687.957	$4737°_{2\,1/2}-30425_{2\,1/2}$	−18	3900.861	5	*MB*	25628.105		
3891.961	10	*MB*	25686.710			3900.983	12	*MB*	25627.304		
3892.439	5	*MB*	25683.555			3901.134	12	*MB*	25626.312	$5010°_{2\,1/2}-30637_{2\,1/2}$	25
3892.594	2	*MB*	25682.533			3901.297	100	*MB*	25625.241	$5942°_{3\,1/2}-31568_{4\,1/2}$	21
3892.780	5	*MB*	25681.306			3901.642	50	*MB*	25622.976	$9723°_{4\,1/2}-35346_{3\,1/2}$	29
3892.928	15	*MB*	25680.329	$10035°_{5\,1/2}-35716_{5\,1/2}$	−42	3901.844	3	*MB*	25621.649		
3893.139	2	*MB*	25678.937			3902.057	6	*MB*	25620.251		
3893.234	140	*MB*	25678.311	$9778°_{2\,1/2}-35457_{1\,1/2}$	−20	3902.112	7	*MB*	25619.889		
				$3995°_{3\,1/2}-29673_{2\,1/2}$	1	3902.253	7	*MB*	25618.964		
3893.401	5	*MB*	25677.209			3902.399	3	*MB*	25618.005		
3893.438	20	*MB*	25676.965			3902.441	10	*MB*	25617.730	$13217_{3\,1/2}-38835°_{2\,1/2}$	−27
3893.851	60	*MB*	25674.242	$7878°_{3\,1/2}-33552_{2\,1/2}$	−11	3902.499	10	*MB*	25617.349	$6521°_{1\,1/2}-32138_{2\,1/2}$	−16
3893.960	10	*MB*	25673.523			3902.613	5	*MB*	25616.601		
3894.045	5	*MB*	25672.963			3902.727	8	*MB*	25615.852	$5942°_{3\,1/2}-31558_{3\,1/2}$	24
3894.296	60	*MB*	25671.308	$4322°_{2\,1/2}-29994_{2\,1/2}$	−24	3902.873	12	*MB*	25614.894	$9198°_{3\,1/2}-34813_{2\,1/2}$	18
3894.347	15	*MB*	25670.972			3902.945	5	*MB*	25614.422		
3894.555	5	*MB*	25669.601			3903.142	2	*MB*	25613.129		
3895.113	500	*MB*	25665.924	$3363°_{2\,1/2}-29029_{1\,1/2}$	−1	3903.238	10	*MB*	25612.499		
3895.448	40	*MB*	25663.717	$7746°_{2\,1/2}-33409_{3\,1/2}$	5	3903.332	160	*MB*	25611.882	$4523°_{4\,1/2}-30134_{5\,1/2}$	5

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3903.488	2	*MB*	25610.858			3910.832	2	*MB*	25562.766		
3903.730	1	*MB*	25609.271			3911.297	100	*MB*	25559.727	$6638°_{4\frac{1}{2}}-32197_{4\frac{1}{2}}$	3
3903.923	70	*MB*	25608.005	$12365°_{4\frac{1}{2}}-37973_{3\frac{1}{2}}$	35	3911.340	3	*MB*	25559.446		
3903.974	3	*MB*	25607.670			3911.519	1	*MB*	25558.276		
3904.048	5	*MB*	25607.185			3911.953	4	*MB*	25555.441		
3904.181	15	*MB*	25606.313			3912.185	160	*MB*	25553.925	$4511°_{2\frac{1}{2}}-30065_{3\frac{1}{2}}$	19
3904.336	200	*MB*	25605.296	$4459°_{3\frac{1}{2}}-30065_{3\frac{1}{2}}$	4	3912.321	5	*MB*	25553.037		
3904.500	8	*MB*	25604.221	$7011_{4\frac{1}{2}}-32616°_{4\frac{1}{2}}$	6	3912.342	2	*MB*	25552.900		
				$10684°_{0\frac{1}{2}}-36288_{0\frac{1}{2}}$	3	3912.426	700	*MB*	25552.351	$2382°_{4\frac{1}{2}}-27934_{4\frac{1}{2}}$	−40
3904.575	40	*MB*	25603.729	$7259°_{3\frac{1}{2}}-32862_{3\frac{1}{2}}$	37	3912.988	12	*MB*	25548.682		
3904.624	2	*MB*	25603.407			3913.137	5	*MB*	25547.709	$6389°_{4\frac{1}{2}}-31937_{3\frac{1}{2}}$	−1
3905.106	5	*MB*	25600.247			3913.238	7	*MB*	25547.049		
3905.181	9	*MB*	25599.756			3913.469	7	*MB*	25545.541		
3905.290	12	*MB*	25599.041	$5969°_{5\frac{1}{2}}-31568_{4\frac{1}{2}}$	29	3913.987	80	*MB*	25542.161	$4523°_{4\frac{1}{2}}-30065_{3\frac{1}{2}}$	30
3905.534	10	*MB*	25597.442			3914.167	12	*MB*	25540.986	$6389°_{4\frac{1}{2}}-31930_{4\frac{1}{2}}$	−7
3905.845	5	*MB*	25595.404	$8280°_{2\frac{1}{2}}-33876_{1\frac{1}{2}}$	−26	3914.407	9	*MB*	25539.420	$14315°_{0\frac{1}{2}}-39855_{0\frac{1}{2}}$	−46
3905.917	6	*MB*	25594.932	$12057°_{2\frac{1}{2}}-37652_{2\frac{1}{2}}$	−51	3914.513	2	*MB*	25538.729		
3906.014	2	*MB*	25594.296			3914.718	2	*MB*	25537.391		
3906.108	25	*MB*	25593.681	$5964°_{3\frac{1}{2}}-31558_{3\frac{1}{2}}$	−48	3914.946	70	*MB*	25535.904	$3745°_{1\frac{1}{2}}-29281_{2\frac{1}{2}}$	5
3906.207	1	*MB*	25593.032			3915.062	8	*MB*	25535.147		
3906.323	2	*MB*	25592.272			3915.216	9	*MB*	25534.143	$4459°_{3\frac{1}{2}}-29994_{2\frac{1}{2}}$	−25
3906.443	15	*MB*	25591.486	$9634°_{1\frac{1}{2}}-35225_{2\frac{1}{2}}$	16	3915.518	280	*MB*	25532.174	$5675°_{4\frac{1}{2}}-31207_{3\frac{1}{2}}$	10
3906.661	1	*MB*	25590.058			3915.618	10	*MB*	25531.522	$7878°_{3\frac{1}{2}}-33409_{3\frac{1}{2}}$	−46
3906.918	140	*MB*	25588.375	$4201°_{1\frac{1}{2}}-29790_{0\frac{1}{2}}$	−1	3915.643	10	*MB*	25531.359	$12057°_{2\frac{1}{2}}-37588_{3\frac{1}{2}}$	−6
3907.072	1	*MB*	25587.366			3915.870	2	*MB*	25529.879		
3907.286	550	*MB*	25585.964	$8927°_{5\frac{1}{2}}-34513_{6\frac{1}{2}}$	11	3916.145	280	*MB*	25528.086	$4266°_{3\frac{1}{2}}-29794_{3\frac{1}{2}}$	−33
3907.430	110	*MB*	25585.022	$4165_{4\frac{1}{2}}-29750°_{5\frac{1}{2}}$	25	3916.187	20	*MB*	25527.812	$7522°_{0\frac{1}{2}}-33050_{1\frac{1}{2}}$	−20
3907.530	2	*MB*	25584.367			3916.254	10	*MB*	25527.375	$8280°_{2\frac{1}{2}}-33808_{2\frac{1}{2}}$	5
3907.638	5	*MB*	25583.660	$7713°_{4\frac{1}{2}}-33296_{4\frac{1}{2}}$	−55	3916.520	12	*MB*	25525.642		
3907.714	7	*MB*	25583.162	$11340°_{3\frac{1}{2}}-36923_{4\frac{1}{2}}$	−28	3916.609	1	*MB*	25525.062		
3907.736	4	*MB*	25583.018			3916.801	8	*MB*	25523.811	$7092_{5\frac{1}{2}}-32616°_{4\frac{1}{2}}$	57
3907.977	10	*MB*	25581.440	$7278°_{1\frac{1}{2}}-32860_{0\frac{1}{2}}$	10	3916.886	20	*MB*	25523.257	$7341_{5\frac{1}{2}}-32864°_{5\frac{1}{2}}$	−13
3908.088	70	*MB*	25580.714	$4844°_{1\frac{1}{2}}-30425_{2\frac{1}{2}}$	9	3916.937	100	*MB*	25522.924	$2382°_{4\frac{1}{2}}-27905_{4\frac{1}{2}}$	14
3908.238	1	*MB*	25579.732			3917.253	50	*MB*	25520.865	$3508°_{0\frac{1}{2}}-29029_{1\frac{1}{2}}$	−17
3908.401	400	*MB*	25578.665	$6913°_{6\frac{1}{2}}-32492_{5\frac{1}{2}}$	20	3917.422	6	*MB*	25519.765	$15565°_{2\frac{1}{2}}-41085_{3\frac{1}{2}}$	−28
3908.532	280	*MB*	25577.808	$3703°_{3\frac{1}{2}}-29281_{2\frac{1}{2}}$	28	3917.485	2	*MB*	25519.354		
3908.754	80	*MB*	25576.356	$7061°_{0\frac{1}{2}}-32638_{1\frac{1}{2}}$	29	3917.639	160	*MB*	25518.351	$5118°_{2\frac{1}{2}}-30637_{2\frac{1}{2}}$	0
3908.784	20	*MB*	25576.159			3917.858	7	*MB*	25516.925	$13012°_{2\frac{1}{2}}-38529_{2\frac{1}{2}}$	0
3909.040	25	*MB*	25574.484	$8402°_{3\frac{1}{2}}-33977_{3\frac{1}{2}}$	13	3917.964	20	*MB*	25516.182		
3909.133	3	*MB*	25573.876			3918.053	10	*MB*	25515.655		
3909.227	5	*MB*	25573.261			3918.189	4	*MB*	25514.769		
3909.309	190	*MB*	25572.724	$3593°_{4\frac{1}{2}}-29166_{4\frac{1}{2}}$	10	3918.269	550	*MB*	25514.248	$5616_{4\frac{1}{2}}-31130°_{3\frac{1}{2}}$	4
3909.507	3	*MB*	25571.429	$15529_{2\frac{1}{2}}-41100°_{2\frac{1}{2}}$	74	3919.075	6	*MB*	25509.001	$11007°_{1\frac{1}{2}}-36516_{1\frac{1}{2}}$	2
3909.744	90	*MB*	25569.879	$4165_{4\frac{1}{2}}-29735°_{4\frac{1}{2}}$	17	3919.201	2	*MB*	25508.181	$7293°_{6\frac{1}{2}}-32802_{5\frac{1}{2}}$	−45
3909.772	10	*MB*	25569.696			3919.529	9	*MB*	25506.046	$11387°_{3\frac{1}{2}}-36893_{3\frac{1}{2}}$	7
3909.924	90	*MB*	25568.702	$2382°_{4\frac{1}{2}}-27950_{5\frac{1}{2}}$	57	3919.720	2	*MB*	25504.803		
3910.030	2	*MB*	25568.009	$11325°_{2\frac{1}{2}}-36893_{3\frac{1}{2}}$	20	3919.806	340	*MB*	25504.244	$5651°_{5\frac{1}{2}}-31155_{6\frac{1}{2}}$	−21
3910.482	5	*MB*	25565.054			3919.911	6	*MB*	25503.561		
3910.686	100	*MB*	25563.720	$9634°_{1\frac{1}{2}}-35197_{1\frac{1}{2}}$	67	3920.162	4	*MB*	25501.928		
3910.759	2	*MB*	25563.243			3920.357	12	*MB*	25500.659		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3920.396	10	MB	25500.406			3928.680	2	MB	25446.637	$9778°_{2\,1/2}-35225_{2\,1/2}$	−32
3920.577	6	MB	25499.229			3928.842	12	MB	25445.588	$7061°_{0\,1/2}-32507_{1\,1/2}$	−15
3920.624	6	MB	25498.923			3928.950	9	MB	25444.888	$5924°_{1\,1/2}-31369_{2\,1/2}$	0
3920.790	10	MB	25497.843	$9269°_{0\,1/2}-34767_{1\,1/2}$	−21	3929.115	12	MB	25443.820	$10114°_{2\,1/2}-35558_{3\,1/2}$	1
3920.846	10	MB	25497.479			3929.221	1	MB	25443.133		
3921.411	7	MB	25493.805			3929.535	12	MB	25441.100		
3921.457	10	MB	25493.506	$19950_{6\,1/2}-45443°_{7\,1/2}$	−13	3929.581	2	MB	25440.802		
3921.731	420	MB	25491.725	$5716°_{3\,1/2}-31207_{3\,1/2}$	14	3929.836	2	MB	25439.152		
3921.803	20	MB	25491.257	$8804°_{4\,1/2}-34295_{4\,1/2}$	32	3929.956	50	MB	25438.375	$5651°_{5\,1/2}-31089_{5\,1/2}$	1
3921.983	8	MB	25490.087	$1410°_{4\,1/2}-26900_{3\,1/2}$	38	3930.285	9	MB	25436.246		
3922.220	8	MB	25488.547			3930.310	2	MB	25436.084		
3922.300	8	MB	25488.027			3930.454	2	MB	25435.152		
3922.545	7	MB	25486.435			3930.792	80	MB	25432.965	$7059°_{4\,1/2}-32492_{5\,1/2}$	0
3922.767	5	MB	25484.993			3931.082	550	MB	25431.089	$1410°_{4\,1/2}-26841_{4\,1/2}$	9
3922.861	15	MB	25484.382	$4322°_{2\,1/2}-29807_{3\,1/2}$	13	3931.187	8	MB	25430.409	$7454_{1\,1/2}-32885°_{2\,1/2}$	−6
3922.912	8	MB	25484.051			3931.362	220	MB	25429.277	$2382°_{4\,1/2}-27811_{3\,1/2}$	28
3922.933	5	MB	25483.915			3931.824	160	MB	25426.289	$5942°_{3\,1/2}-31369_{2\,1/2}$	−5
3922.958	2	MB	25483.752			3932.144	110	MB	25424.220	$5651°_{5\,1/2}-31075_{4\,1/2}$	−25
3923.024	2	MB	25483.324			3932.230	7	MB	25423.664		
3923.103	400	MB	25482.810	$4511°_{2\,1/2}-29994_{2\,1/2}$	27	3932.447	2	MB	25422.261		
3923.219	10	MB	25482.057			3932.636	2	MB	25421.040		
3923.416	7	MB	25480.777			3932.796	12	MB	25420.005	$6517°_{2\,1/2}-31937_{3\,1/2}$	−28
3923.511	10	MB	25480.161	$17232_{7\,1/2}-42712°_{6\,1/2}$	3	3932.976	15	MB	25418.842	$9778°_{2\,1/2}-35197_{1\,1/2}$	−11
3923.648	4	MB	25479.271			3933.034	3	MB	25418.467	$7878°_{3\,1/2}-33296_{4\,1/2}$	−9
3923.766	1	MB	25478.505			3933.141	10	MB	25417.776		
3924.125	6	MB	25476.174			3933.233	10	MB	25417.181		
3924.313	40	MB	25474.953			3933.385	4	MB	25416.199		
3924.542	10	MB	25473.467	$12057°_{2\,1/2}-37530_{1\,1/2}$	−58	3933.407	10	MB	25416.057		
3924.646	320	MB	25472.792	$4511°_{2\,1/2}-29984_{1\,1/2}$	−2	3933.504	5	MB	25415.430		
3924.794	50	MB	25471.831	$4201°_{1\,1/2}-29673_{2\,1/2}$	−45	3933.526	1	MB	25415.288		
				$4322°_{2\,1/2}-29794_{3\,1/2}$	23						
						3933.583	4	MB	25414.920		
3924.991	8	MB	25470.553	$10641°_{2\,1/2}-36112_{3\,1/2}$	−25	3933.654	90	MB	25414.461	$5010°_{2\,1/2}-30425_{2\,1/2}$	−17
3925.039	4	MB	25470.242			3933.728	220	MB	25413.983	$14625_{5\,1/2}-40039°_{6\,1/2}$	−37
3925.093	8	MB	25469.891							$5675°_{4\,1/2}-31089_{5\,1/2}$	15
3925.321	1	MB	25468.412			3933.830	12	MB	25413.324		
3925.396	4	MB	25467.925	$19481_{4\,1/2}-44949°_{4\,1/2}$	−45	3933.983	6	MB	25412.336		
3925.722	3	MB	25465.810			3934.392	7	MB	25409.694		
3925.870	12	MB	25464.850			3934.512	8	MB	25408.919	$8402°_{3\,1/2}-33811_{4\,1/2}$	20
3925.892	20	MB	25464.708			3934.751	25	MB	25407.376	$4266°_{3\,1/2}-29673_{2\,1/2}$	3
3926.153	12	MB	25463.015	$3703°_{3\,1/2}-29166_{4\,1/2}$	12	3934.982	7	MB	25405.884		
3926.269	12	MB	25462.262	$5283°_{0\,1/2}-30745_{1\,1/2}$	6	3935.038	4	MB	25405.522		
3926.666	6	MB	25459.688			3935.144	5	MB	25404.838	$13256_{1\,1/2}-38661°_{1\,1/2}$	19
3926.783	3	MB	25458.930	$19136°_{2\,1/2}-44594_{2\,1/2}$	26	3935.211	2	MB	25404.406	$8131_{4\,1/2}-33535°_{3\,1/2}$	−12
3926.997	25	MB	25457.542	$7259°_{3\,1/2}-32716_{2\,1/2}$	−29	3935.241	12	MB	25404.212	$5964°_{3\,1/2}-31369_{2\,1/2}$	15
3927.144	8	MB	25456.589	$11387°_{3\,1/2}-36844_{2\,1/2}$	16	3935.519	12	MB	25402.418	$7746°_{2\,1/2}-33148_{2\,1/2}$	14
3927.174	6	MB	25456.395	$19138°_{1\,1/2}-44594_{2\,1/2}$	1	3935.919	35	MB	25399.836	$5675°_{4\,1/2}-31075_{4\,1/2}$	−3
3927.381	80	MB	25455.053	$2879°_{5\,1/2}-28334_{4\,1/2}$	−7	3936.070	7	MB	25398.862	$13436_{2\,1/2}-38835°_{2\,1/2}$	−17
3927.561	50	MB	25453.887	$11742°_{5\,1/2}-37196_{4\,1/2}$	−6	3936.171	9	MB	25398.210	$8175°_{2\,1/2}-33574_{1\,1/2}$	−71
3928.310	110	MB	25449.034	$4459°_{3\,1/2}-29908_{4\,1/2}$	2	3936.602	8	MB	25395.429		
3928.517	4	MB	25447.693			3936.804	50	MB	25394.126		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3936.962	9	*MB*	25393.107	$11949°_{3\,1/2}-37342_{2\,1/2}$	−30						
3936.999	8	*MB*	25392.868			3945.519	10	*MB*	25338.036	$12466°_{1\,1/2}-37804_{1\,1/2}$	32
3937.024	2	*MB*	25392.707			3945.685	6	*MB*	25336.970		
3937.136	40	*MB*	25391.985	$12260°_{3\,1/2}-37652_{2\,1/2}$	−17	3945.851	10	*MB*	25335.904		
3937.177	10	*MB*	25391.721	$5437°_{3\,1/2}-30829_{3\,1/2}$	19	3946.051	9	*MB*	25334.620	$4459°_{3\,1/2}-29794_{3\,1/2}$	−24
3937.270	2	*MB*	25391.121			3946.183	15	*MB*	25333.773	$6517°_{2\,1/2}-31851_{2\,1/2}$	−4
3937.372	7	*MB*	25390.463			3946.259	10	*MB*	25333.285	$7746°_{2\,1/2}-33079_{3\,1/2}$	−41
3937.621	15	*MB*	25388.857	$7722_{2\,1/2}-33111°_{3\,1/2}$	−20	3946.573	3	*MB*	25331.269		
3937.806	35	*MB*	25387.665	$2563°_{5\,1/2}-27950_{5\,1/2}$	7	3946.709	80	*MB*	25330.396	$7818°_{1\,1/2}-33148_{2\,1/2}$	−45
3938.001	1	*MB*	25386.408			3946.758	10	*MB*	25330.082	$6521°_{1\,1/2}-31851_{2\,1/2}$	17
3938.077	400	*MB*	25385.918	$12751°_{5\,1/2}-38137_{5\,1/2}$	18	3946.885	9	*MB*	25329.267		
3938.341	9	*MB*	25384.216			3946.992	2	*MB*	25328.580		
3938.601	15	*MB*	25382.540	$12751°_{5\,1/2}-38134_{4\,1/2}$	−77	3947.122	12	*MB*	25327.746	$4737°_{2\,1/2}-30065_{3\,1/2}$	−44
3938.653	7	*MB*	25382.205	$12466°_{1\,1/2}-37848_{2\,1/2}$	85	3947.261	8	*MB*	25326.854	$5716°_{3\,1/2}-31043_{2\,1/2}$	−39
3938.899	5	*MB*	25380.620			3947.728	10	*MB*	25323.858	$2581°_{4\,1/2}-27905_{4\,1/2}$	−41
3938.955	10	*MB*	25380.259			3947.785	4	*MB*	25323.493		
3939.178	10	*MB*	25378.822	$20783_{5\,1/2}-46162°_{4\,1/2}$	−79	3947.966	220	*MB*	25322.332	$3363°_{2\,1/2}-28685_{2\,1/2}$	1
3939.242	5	*MB*	25378.410			3948.054	10	*MB*	25321.767		
3939.503	15	*MB*	25376.729	$8175°_{2\,1/2}-33552_{2\,1/2}$	10	3948.267	6	*MB*	25320.401		
3939.531	40	*MB*	25376.548	$8531_{3\,1/2}-33908°_{4\,1/2}$	34	3948.321	9	*MB*	25320.055		
3939.626	10	*MB*	25375.937			3948.383	5	*MB*	25319.657		
3939.654	40	*MB*	25375.756	$1873°_{3\,1/2}-27249_{2\,1/2}$	21	3948.490	8	*MB*	25318.971		
3939.767	9	*MB*	25375.028	$12762°_{4\,1/2}-38137_{5\,1/2}$	−12	3948.825	12	*MB*	25316.823	$13515°_{3\,1/2}-38832_{2\,1/2}$	−32
3939.952	8	*MB*	25373.837			3948.947	20	*MB*	25316.041	$17851°_{0\,1/2}-43167_{1\,1/2}$	−38
3940.111	3	*MB*	25372.813			3949.128	20	*MB*	25314.881		
3940.172	4	*MB*	25372.420			3949.347	8	*MB*	25313.477	$10798°_{2\,1/2}-36112_{3\,1/2}$	11
3940.215	10	*MB*	25372.143			3949.406	130	*MB*	25313.099	$1873°_{3\,1/2}-27187_{3\,1/2}$	−13
3940.326	550	*MB*	25371.429	$2563°_{5\,1/2}-27934_{4\,1/2}$	24	3949.645	1	*MB*	25311.567	$10314_{4\,1/2}-35625°_{3\,1/2}$	29
3940.445	10	*MB*	25370.662			3949.738	2	*MB*	25310.971		
3940.613	15	*MB*	25369.581	$2581°_{4\,1/2}-27950_{5\,1/2}$	−52	3950.210	3	*MB*	25307.947		
3940.658	70	*MB*	25369.291	$3995°_{3\,1/2}-29364_{3\,1/2}$	11	3950.433	130	*MB*	25306.518	$5118°_{2\,1/2}-30425_{2\,1/2}$	−24
3940.752	10	*MB*	25368.686	$10088°_{1\,1/2}-35457_{1\,1/2}$	8	3950.539	20	*MB*	25305.839		
3940.874	15	*MB*	25367.901	$8927°_{5\,1/2}-34295_{4\,1/2}$	−34	3950.602	20	*MB*	25305.436		
3940.964	220	*MB*	25367.321	$3363°_{2\,1/2}-28730_{3\,1/2}$	37	3950.688	6	*MB*	25304.885	$7202°_{2\,1/2}-32507_{1\,1/2}$	−27
3941.123	12	*MB*	25366.298			3950.807	50	*MB*	25304.123	$7746°_{2\,1/2}-33050_{1\,1/2}$	17
3941.736	7	*MB*	25362.353			3951.141	5	*MB*	25301.984		
3941.767	10	*MB*	25362.154			3951.221	8	*MB*	25301.472	$6549°_{2\,1/2}-31851_{2\,1/2}$	−16
3941.848	10	*MB*	25361.632	$0°_{3\,1/2}-25361_{4\,1/2}$	−41	3951.415	20	*MB*	25300.229	$9634°_{1\,1/2}-34934_{2\,1/2}$	−7
3942.157	1400	*MB*	25359.645	$0°_{3\,1/2}-25359_{2\,1/2}$	−40	3951.622	80	*MB*	25298.904	$7746°_{2\,1/2}-33045_{2\,1/2}$	−5
3942.245	25	*MB*	25359.079	$7818°_{1\,1/2}-33177_{0\,1/2}$	30	3952.107	70	*MB*	25295.800	$4511°_{2\,1/2}-29807_{3\,1/2}$	−20
3942.746	1900	*MB*	25355.856	$6913°_{6\,1/2}-32269_{7\,1/2}$	−3	3952.545	2200	*MB*	25292.996	$2641°_{3\,1/2}-27934_{4\,1/2}$	−82
3943.132	110	*MB*	25353.374	$2581°_{4\,1/2}-27934_{4\,1/2}$	−6	3952.597	90	*MB*	25292.664	$6638°_{4\,1/2}-31930_{4\,1/2}$	−13
3943.491	40	*MB*	25351.066	$8804°_{4\,1/2}-34155_{3\,1/2}$	−20	3952.688	20	*MB*	25292.081	$5942°_{3\,1/2}-31234_{2\,1/2}$	1
				$4322°_{2\,1/2}-29673_{2\,1/2}$	5	3953.486	5	*MB*	25286.976		
3943.881	550	*MB*	25348.559	$6389°_{4\,1/2}-31738_{5\,1/2}$	18	3953.656	240	*MB*	25285.889	$3995°_{3\,1/2}-29281_{2\,1/2}$	−24
3944.093	15	*MB*	25347.197	$4459°_{3\,1/2}-29807_{3\,1/2}$	−8						
3944.188	3	*MB*	25346.586			3953.917	20	*MB*	25284.220	$10641°_{2\,1/2}-35925_{3\,1/2}$	−19
3944.544	10	*MB*	25344.299			3953.943	55	*MB*	25284.054	$4523°_{4\,1/2}-29807_{3\,1/2}$	9
3944.834	50	*MB*	25342.436	$10114°_{2\,1/2}-35457_{1\,1/2}$	1	3953.968	55	*MB*	25283.894	$3745°_{1\,1/2}-29029_{1\,1/2}$	16
3944.918	60	*MB*	25341.896	$15134_{4\,1/2}-40475°_{3\,1/2}$	21	3954.060	7	*MB*	25283.306	$4511°_{2\,1/2}-29794_{3\,1/2}$	46
				$2563°_{5\,1/2}-27905_{4\,1/2}$	−27	3954.172	9	*MB*	25282.590	$23267_{3\,1/2}-48549°_{4\,1/2}$	−48

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3954.194	3	*MB*	25282.449			3960.913	550	*MB*	25239.562	$2595°_{1\,1/2}-27835_{1\,1/2}$	−26
3954.441	9	*MB*	25280.870	$11007°_{1\,1/2}-36288_{0\,1/2}$	10	3961.089	15	*MB*	25238.441		
3954.524	9	*MB*	25280.339	$7092_{5\,1/2}\ -32372°_{4\,1/2}$	−16	3961.260	15	*MB*	25237.352		
3954.687	9	*MB*	25279.297			3961.645	20	*MB*	25234.899	$4203°_{6\,1/2}-29438_{5\,1/2}$	16
3954.757	5	*MB*	25278.850	$15822_{3\,1/2}\ -41100°_{2\,1/2}$	−22	3961.727	7	*MB*	25234.377		
3954.869	2	*MB*	25278.134			3961.980	7	*MB*	25232.765		
3954.940	1	*MB*	25277.680	$10924°_{4\,1/2}-36202_{4\,1/2}$	0	3962.077	110	*MB*	25232.148	$7818°_{1\,1/2}-33050_{1\,1/2}$	4
3955.100	6	*MB*	25276.658			3962.190	8	*MB*	25231.428	$10114°_{2\,1/2}-35346_{3\,1/2}$	29
3955.170	7	*MB*	25276.210	$9491°_{0\,1/2}-34767_{1\,1/2}$	12	3962.416	6	*MB*	25229.989		
3955.271	2	*MB*	25275.565			3962.505	6	*MB*	25229.422		
3955.360	220	*MB*	25274.996	$7341_{5\,1/2}\ -32616°_{4\,1/2}$	−15	3962.647	5	*MB*	25228.518	$7278°_{1\,1/2}-32507_{1\,1/2}$	−1
3955.455	9	*MB*	25274.389			3962.780	8	*MB*	25227.672	$9198°_{3\,1/2}-34426_{2\,1/2}$	−38
3955.600	10	*MB*	25273.463			3962.896	12	*MB*	25226.933	$7818°_{1\,1/2}-33045_{2\,1/2}$	−14
3955.647	5	*MB*	25273.162			3963.205	12	*MB*	25224.966		
3955.710	5	*MB*	25272.760			3963.260	7	*MB*	25224.616	$13436_{2\,1/2}\ -38661°_{1\,1/2}$	−49
3955.918	110	*MB*	25271.431	$4523°_{4\,1/2}-29794_{3\,1/2}$	−52	3963.370	70	*MB*	25223.916	$4910°_{5\,1/2}-30134_{5\,1/2}$	−30
3956.051	160	*MB*	25270.581	$5819°_{4\,1/2}-31089_{5\,1/2}$	−36	3963.444	10	*MB*	25223.445	$7011_{4\,1/2}\ -32235°_{3\,1/2}$	11
3956.100	12	*MB*	25270.268	$7878°_{3\,1/2}-33148_{2\,1/2}$	8	3963.615	10	*MB*	25222.357		
3956.185	3	*MB*	25269.725			3963.686	3	*MB*	25221.905	$20940_{3\,1/2}\ -46162°_{4\,1/2}$	53
3956.275	700	*MB*	25269.150	$4910°_{5\,1/2}-30180_{6\,1/2}$	18	3964.182	110	*MB*	25218.750	$12751°_{5\,1/2}-37970_{5\,1/2}$	0
3956.388	9	*MB*	25268.429			3964.287	1	*MB*	25218.082		
3956.898	100	*MB*	25265.172	$5942°_{3\,1/2}-31207_{3\,1/2}$	43	3964.410	2	*MB*	25217.299		
				$5437°_{3\,1/2}-30702_{4\,1/2}$	−15	3964.496	280	*MB*	25216.752	$2595°_{1\,1/2}-27812_{2\,1/2}$	−1
3956.942	5	*MB*	25264.891			3964.593	2	*MB*	25216.135	$6549°_{2\,1/2}-31766_{1\,1/2}$	−65
3957.151	25	*MB*	25263.557	$2641°_{3\,1/2}-27905_{4\,1/2}$	−40	3964.742	9	*MB*	25215.188		
3957.395	7	*MB*	25261.999			3964.950	7	*MB*	25213.865	$4459°_{3\,1/2}-29673_{2\,1/2}$	−32
3957.633	8	*MB*	25260.480			3965.076	12	*MB*	25213.064		
3957.696	9	*MB*	25260.078			3965.382	8	*MB*	25211.118	$12762°_{4\,1/2}-37973_{3\,1/2}$	−16
3957.860	12	*MB*	25259.031	$7059°_{4\,1/2}-32318_{3\,1/2}$	−71	3965.421	3	*MB*	25210.870	$7202°_{2\,1/2}-32413_{3\,1/2}$	53
3957.885	12	*MB*	25258.872			3965.783	7	*MB*	25208.569		
3957.964	110	*MB*	25258.368	$7233°_{5\,1/2}-32492_{5\,1/2}$	−42	3965.895	10	*MB*	25207.857	$12762°_{4\,1/2}-37970_{5\,1/2}$	−33
3958.141	10	*MB*	25257.238			3966.245	10	*MB*	25205.633	$9723°_{4\,1/2}-34928_{4\,1/2}$	0
3958.255	160	*MB*	25256.511	$5819°_{4\,1/2}-31075_{4\,1/2}$	21	3966.360	3	*MB*	25204.902		
3958.423	6	*MB*	25255.439			3966.590	5	*MB*	25203.440		
3958.785	2	*MB*	25253.129			3966.624	4	*MB*	25203.224		
3958.864	160	*MB*	25252.626	$7061°_{0\,1/2}-32314_{0\,1/2}$	−4	3966.818	6	*MB*	25201.992		
3958.967	15	*MB*	25251.969			3966.959	3	*MB*	25201.096	$7878°_{3\,1/2}-33079_{3\,1/2}$	−87
3959.031	3	*MB*	25251.560			3967.044	550	*MB*	25200.556	$2634°_{2\,1/2}-27835_{1\,1/2}$	−10
3959.519	15	*MB*	25248.448	$6517°_{2\,1/2}-31766_{1\,1/2}$	−41	3967.177	110	*MB*	25199.711	$5437°_{3\,1/2}-30637_{2\,1/2}$	−23
3959.609	130	*MB*	25247.874	$4201°_{1\,1/2}-29449_{1\,1/2}$	−10	3967.290	4	*MB*	25198.993		
3959.730	12	*MB*	25247.103			3967.393	12	*MB*	25198.339		
3959.764	5	*MB*	25246.886	$11949°_{3\,1/2}-37196_{4\,1/2}$	−63	3967.439	10	*MB*	25198.047	$7293°_{6\,1/2}-32492_{5\,1/2}$	−52
3959.793	110	*MB*	25246.701	$4737°_{2\,1/2}-29984_{1\,1/2}$	23	3967.535	80	*MB*	25197.437	$9723°_{4\,1/2}-34920_{3\,1/2}$	−15
3959.831	25	*MB*	25246.459	$5924°_{1\,1/2}-31170_{1\,1/2}$	18	3967.581	12	*MB*	25197.145		
3960.093	7	*MB*	25244.789	$6521°_{1\,1/2}-31766_{1\,1/2}$	12	3967.604	8	*MB*	25196.999		
3960.370	70	*MB*	25243.023	$5964°_{3\,1/2}-31207_{3\,1/2}$	−7	3967.726	1	*MB*	25196.224		
3960.530	20	*MB*	25242.003			3967.806	6	*MB*	25195.717		
3960.549	30	*MB*	25241.882			3967.868	6	*MB*	25195.323		
3960.740	8	*MB*	25240.665			3967.987	3	*MB*	25194.567		
3960.825	10	*MB*	25240.123	$8804°_{4\,1/2}-34044_{4\,1/2}$	−93	3968.059	5	*MB*	25194.110		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3968.229	2	*MB*	25193.031			3975.070	190	*MB*	25149.675	$7713°_{4\,1/2}-32862_{3\,1/2}$	−2
3968.256	12	*MB*	25192.859			3975.109	7	*MB*	25149.428	$4844°_{1\,1/2}-29994_{2\,1/2}$	32
3968.542	9	*MB*	25191.044	$11325°_{2\,1/2}-36516_{1\,1/2}$	27	3975.291	7	*MB*	25148.277		
3968.568	8	*MB*	25190.879			3975.455	6	*MB*	25147.240		
3969.159	12	*MB*	25187.128	$10924°_{4\,1/2}-36112_{3\,1/2}$	−16	3975.583	2	*MB*	25146.430		
3969.204	8	*MB*	25186.842			3975.712	8	*MB*	25145.614		
3969.245	15	*MB*	25186.582	$5969°_{5\,1/2}-31155_{6\,1/2}$	−33	3975.882	5	*MB*	25144.539		
3969.351	7	*MB*	25185.910			3976.045	12	*MB*	25143.508	$15576_{1\,1/2}-40720°_{1\,1/2}$	−45
3969.781	10	*MB*	25183.182			3976.070	10	*MB*	25143.350	$2563°_{5\,1/2}-27706_{6\,1/2}$	−47
3969.947	3	*MB*	25182.129			3976.140	3	*MB*	25142.907		
3970.042	110	*MB*	25181.526	$11742°_{5\,1/2}-36923_{4\,1/2}$	−17	3976.689	10	*MB*	25139.436	$4844°_{1\,1/2}-29984_{1\,1/2}$	29
3970.147	3	*MB*	25180.860			3976.778	50	*MB*	25138.874	$7059°_{4\,1/2}-32197_{4\,1/2}$	−35
3970.439	40	*MB*	25179.008	$9634°_{1\,1/2}-34813_{2\,1/2}$	−7	3976.831	4	*MB*	25138.539		
3970.542	5	*MB*	25178.355			3977.002	10	*MB*	25137.458		
3970.644	120	*MB*	25177.708	$2634°_{2\,1/2}-27812_{2\,1/2}$	−23	3977.073	6	*MB*	25137.009	$10088°_{1\,1/2}-35225_{2\,1/2}$	−6
3970.786	10	*MB*	25176.808	$2634°_{2\,1/2}-27811_{3\,1/2}$	−21	3977.106	12	*MB*	25136.800	$3593°_{4\,1/2}-28730_{3\,1/2}$	−29
3971.019	10	*MB*	25175.331	$12057°_{2\,1/2}-37232_{1\,1/2}$	0	3977.289	8	*MB*	25135.644		
3971.202	2	*MB*	25174.171			3977.527	25	*MB*	25134.140	$8774_{4\,1/2}-33908°_{4\,1/2}$	11
3971.248	9	*MB*	25173.879	$8702°_{1\,1/2}-33876_{1\,1/2}$	−53	3977.646	2	*MB*	25133.388		
3971.405	8	*MB*	25172.884	$8804°_{4\,1/2}-33977_{3\,1/2}$	−31	3977.739	45	*MB*	25132.800	$5942°_{3\,1/2}-31075_{4\,1/2}$	−4
3971.683	320	*MB*	25171.122	$3995°_{3\,1/2}-29166_{4\,1/2}$	−14	3977.808	65	*MB*	25132.364	$2382°_{4\,1/2}-27514_{3\,1/2}$	−49
3971.725	12	*MB*	25170.856	$2641°_{3\,1/2}-27812_{2\,1/2}$	17	3977.841	7	*MB*	25132.156		
3971.794	8	*MB*	25170.419			3978.226	5	*MB*	25129.724	$11007°_{1\,1/2}-36137_{2\,1/2}$	−80
3971.874	80	*MB*	25169.911	$2641°_{3\,1/2}-27811_{3\,1/2}$	−25	3978.340	9	*MB*	25129.004	$8280°_{2\,1/2}-33409_{3\,1/2}$	53
3972.070	190	*MB*	25168.670	$6389°_{4\,1/2}-31558_{3\,1/2}$	−13	3978.486	7	*MB*	25128.082		
3972.371	7	*MB*	25166.763	$7878°_{3\,1/2}-33045_{2\,1/2}$	−3	3978.646	550	*MB*	25127.071	$4322°_{2\,1/2}-29449_{1\,1/2}$	1
3972.500	5	*MB*	25165.945			3978.746	3	*MB*	25126.440		
3972.583	8	*MB*	25165.420			3978.884	10	*MB*	25125.568		
3972.638	6	*MB*	25165.071			3979.297	2	*MB*	25122.961		
3972.761	10	*MB*	25164.292			3979.722	2	*MB*	25120.278		
3972.821	6	*MB*	25163.912			3979.796	10	*MB*	25119.811		
3972.888	4	*MB*	25163.488			3979.941	15	*MB*	25118.895	$5924°_{1\,1/2}-31043_{2\,1/2}$	−10
3972.954	8	*MB*	25163.070	$7722_{2\,1/2}-32885°_{2\,1/2}$	−11	3980.258	12	*MB*	25116.895	$8927°_{5\,1/2}-34044_{4\,1/2}$	−31
3973.046	50	*MB*	25162.487	$4511°_{2\,1/2}-29673_{2\,1/2}$	−25	3980.307	7	*MB*	25116.586	$7746°_{2\,1/2}-32862_{3\,1/2}$	4
3973.194	9	*MB*	25161.550			3980.451	8	*MB*	25115.677	$7522°_{0\,1/2}-32638_{1\,1/2}$	−29
										$7202°_{2\,1/2}-32318_{3\,1/2}$	31
3973.263	2	*MB*	25161.113								
3973.333	3	*MB*	25160.669			3980.890	400	*MB*	25112.907	$5716°_{3\,1/2}-30829_{3\,1/2}$	0
3973.385	5	*MB*	25160.340			3981.234	8	*MB*	25110.738	$10114°_{2\,1/2}-35225_{2\,1/2}$	−34
3973.498	10	*MB*	25159.625							$5964°_{3\,1/2}-31075_{4\,1/2}$	31
3973.643	1	*MB*	25158.707			3981.590	5	*MB*	25108.493	$5924°_{1\,1/2}-31032_{0\,1/2}$	86
3973.917	25b	*MB*	25156.972			3981.723	10	*MB*	25107.654	$13784°_{1\,1/2}-38892_{0\,1/2}$	−12
3974.096	9	*MB*	25155.839	$15517°_{6\,1/2}-40673_{5\,1/2}$	36	3981.893	30	*MB*	25106.582	$5969°_{5\,1/2}-31075_{4\,1/2}$	−13
3974.200	50	*MB*	25155.181	$5010°_{2\,1/2}-30166_{3\,1/2}$	−5	3982.009	3	*MB*	25105.851	$8702°_{1\,1/2}-33808_{2\,1/2}$	−21
3974.336	2	*MT*	25154.320	$7259°_{3\,1/2}-32413_{3\,1/2}$	49	3982.098	2	*MB*	25105.289		
3974.495	10	*MB*	25153.314	$5675°_{4\,1/2}-30829_{3\,1/2}$	−46	3982.248	15	*MB*	25104.344	$7722_{2\,1/2}-32826°_{1\,1/2}$	−38
3974.549	12	*M*[redacted]	5152.972	$13784°_{1\,1/2}-38937_{1\,1/2}$	−9	3982.376	10	*MB*	25103.537		
3974.622	6	*MB*	25152.510			3982.898	400	*MB*	25100.247	$6638°_{4\,1/2}-31738_{5\,1/2}$	21
3974.740	3	*MB*	25151.763			3983.007	1	*MB*	25099.560	$0°_{3\,1/2}-25099_{1\,1/2}$	78
3974.912	9	*MB*	25150.675			3983.210	11	*MB*	25098.281	$4266°_{3\,1/2}-29364_{3\,1/2}$	−61
3974.983	1	*MB*	25150.226	$13659°_{4\,1/2}-38809_{3\,1/2}$	79	3983.288	220	*MB*	25097.789	$4165_{4\,1/2}-29263°_{5\,1/2}$	2

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
3983.325	80	*MB*	25097.556	$16192°_{4\,1/2}-41289_{5\,1/2}$	52	3991.921	8	*MB*	25043.514		
3983.388	4	*MB*	25097.159	$9198°_{3\,1/2}-34295_{4\,1/2}$	36	3992.125	50	*MB*	25042.234	$7818°_{1\,1/2}-32860_{0\,1/2}$	28
3983.652	2	*MB*	25095.496			3992.381	500	*MB*	25040.628	$3593°_{4\,1/2}-28634_{5\,1/2}$	−5
3983.722	2	*MB*	25095.055			3992.710	30	*MB*	25038.565		
3983.848	2	*MB*	25094.262			3992.906	260	*MB*	25037.336	$5924°_{1\,1/2}-30961_{1\,1/2}$	22
3984.103	3	*MB*	25092.656			3992.986	4	*MB*	25036.834		
3984.312	15	*MB*	25091.339			3993.152	12	*MB*	25035.794		
3984.671	550	*MB*	25089.079	$7713°_{4\,1/2}-32802_{5\,1/2}$	3	3993.189	12	*MB*	25035.562	$7278°_{1\,1/2}-32314_{0\,1/2}$	15
3984.778	3	*MB*	25088.405			3993.403	15	*MB*	25034.220	$9778°_{2\,1/2}-34813_{2\,1/2}$	4
3985.005	10	*MB*	25086.976	$8448_{2\,1/2}-33535°_{3\,1/2}$	−18	3993.818	650	*MB*	25031.619	$7341_{5\,1/2}-32372°_{4\,1/2}$	5
3985.650	6	*MB*	25082.916	$10114°_{2\,1/2}-35197_{1\,1/2}$	−40	3993.907	2	*MB*	25031.061		
3985.933	15	*MB*	25081.135	$20783_{5\,1/2}-45864°_{5\,1/2}$	−22	3994.059	1	*MB*	25030.108		
3986.019	12	*MB*	25080.594			3994.226	2	*MB*	25029.062		
3986.404	40	*MB*	25078.172	$5964°_{3\,1/2}-31043_{2\,1/2}$	−41	3994.462	12	*MB*	25027.583		
3986.624	3	*MB*	25076.788	$13117_{4\,1/2}-38194°_{4\,1/2}$	−17	3994.541	12	*MB*	25027.088	$3703°_{3\,1/2}-28730_{3\,1/2}$	−29
3986.734	10	*MB*	25076.096			3994.584	80	*MB*	25026.819	$5675°_{4\,1/2}-30702_{4\,1/2}$	−27
3986.876	1	*MB*	25075.203			3994.646	10	*MB*	25026.430	$1873°_{3\,1/2}-26900_{3\,1/2}$	11
3986.978	4	*MB*	25074.562			3994.719	4	*MB*	25025.973	$13515°_{3\,1/2}-38541_{4\,1/2}$	−46
3987.067	10	*MB*	25074.002	$13758°_{1\,1/2}-38832_{2\,1/2}$	−36	3994.802	15	*MB*	25025.453	$2879°_{5\,1/2}-27905_{4\,1/2}$	−8
3987.213	6	*MB*	25073.084			3995.031	3	*MB*	25024.019		
3987.513	6	*MB*	25071.198	$2879°_{5\,1/2}-27950_{5\,1/2}$	2	3995.107	10	*MB*	25023.543		
3987.708	3	*MB*	25069.972			3995.238	5	*MB*	25022.722		
3988.026	5	*MB*	25067.973			3995.391	6	*MB*	25021.764	$12057°_{2\,1/2}-37078_{1\,1/2}$	−7
3988.142	10	*MB*	25067.243			3995.425	25	*MB*	25021.551	$3703°_{3\,1/2}-28725_{4\,1/2}$	−2
3988.266	10	*MB*	25066.464			3995.539	10	*MB*	25020.837	$18147°_{2\,1/2}-43167_{1\,1/2}$	−37
3988.385	2	*MB*	25065.716			3995.599	1	*MB*	25020.461		
3988.498	5	*MB*	25065.006			3995.752	8	*MB*	25019.503		
3988.570	4	*MB*	25064.554			3996.145	5	*MB*	25017.043		
3988.625	8	*MB*	25064.208	$12466°_{1\,1/2}-37530_{1\,1/2}$	5	3996.353	10	*MB*	25015.741		
3988.735	3	*MB*	25063.517	$23267_{3\,1/2}-48330°_{3\,1/2}$	78	3996.473	50	*MB*	25014.990	$4266°_{3\,1/2}-29281_{2\,1/2}$	13
3988.849	3	*MB*	25062.801			3996.765	12	*MB*	25013.162	$13515°_{3\,1/2}-38529_{2\,1/2}$	−5
3988.903	6	*MB*	25062.461	$8531_{3\,1/2}-33594°_{2\,1/2}$	−12	3996.888	4	*MB*	25012.392		
3989.099	2	*MB*	25061.230			3997.026	2	*MB*	25011.529	$8896_{5\,1/2}-33908°_{4\,1/2}$	65
3989.277	20	*MB*	25060.112			3997.108	2	*MB*	25011.016		
3989.440	260	*MB*	25059.088	$7259°_{3\,1/2}-32318_{3\,1/2}$	−11	3997.172	1	*MB*	25010.615		
3989.519	5	*MB*	25058.591			3997.270	12	*MB*	25010.002	$5819°_{4\,1/2}-30829_{3\,1/2}$	−8
3989.551	2	*MB*	25058.391			3997.471	35	*MB*	25008.745	$6549°_{2\,1/2}-31558_{3\,1/2}$	27
3989.751	25	*MB*	25057.134	$4737°_{2\,1/2}-29794_{3\,1/2}$	−9	3997.671	8	*MB*	25007.493	$8169°_{1\,1/2}-33177_{0\,1/2}$	−4
3989.823	2	*MB*	25056.682			3997.714	100	*MB*	25007.224	$8402°_{3\,1/2}-33409_{3\,1/2}$	−4
3989.879	2	*MB*	25056.331			3998.234	10	*MB*	25003.972	$8531_{3\,1/2}-33535°_{3\,1/2}$	14
3990.100	130	*MB*	25054.943	$2879°_{5\,1/2}-27934_{4\,1/2}$	0	3998.344	3	*MB*	25003.284		
3990.203	1	*MB*	25054.296	$5010°_{2\,1/2}-30065_{3\,1/2}$	2	3998.395	5	*MB*	25002.965	$10454°_{1\,1/2}-35457_{1\,1/2}$	−80
3990.416	20	*MB*	25052.959	$5616_{4\,1/2}-30669°_{4\,1/2}$	−3	3998.524	2	*MB*	25002.159		
3990.620	4	*MB*	25051.678			3998.739	6	*MB*	25000.814	$10924°_{4\,1/2}-35925_{3\,1/2}$	9
3990.689	50	*MB*	25051.245	$5651°_{5\,1/2}-30702_{4\,1/2}$	−7	3999.015	4	*MB*	24999.089		
3990.857	8	*MB*	25050.190			3999.080	1	*MB*	24998.6[illegible]	[illegible]	
3991.127	10	*MB*	25048.496			3999.237	2000	*MB*	24997.701	$2382°_{4\,1/2}-27379_{5\,1/2}$	−1
3991.222	15	*MB*	25047.900	$13784°_{1\,1/2}-38832_{2\,1/2}$	25	3999.339	10	*MB*	24997.064		
3991.322	40	*MB*	25047.272	$5118°_{2\,1/2}-30166_{3\,1/2}$	21	3999.439	3	*MB*	24996.439		
3991.520	2	*MB*	25046.030			3999.478	3	*MB*	24996.195		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
3999.543	2	*MB*	24995.789			4006.774	5	*MB*	24950.680	$10274°_{3\,1/2}-35225_{2\,1/2}$	−4
3999.656	12	*MB*	24995.083			4007.070	15	*MB*	24948.837		
4000.063	6	*MB*	24992.539			4007.301	1	*MB*	24947.399		
4000.384	12	*MB*	24990.534			4007.474	50	*MB*	24946.322	$15529_{2\,1/2}-40475°_{3\,1/2}$	−26
4000.439	2	*MB*	24990.191							$5118°_{2\,1/2}-30065_{3\,1/2}$	−35
4000.594	4	*MB*	24989.222			4007.587	150	*MB*	24945.619	$4844°_{1\,1/2}-29790_{0\,1/2}$	−6
4000.680	12	*MB*	24988.685	$9778°_{2\,1/2}-34767_{1\,1/2}$	−19	4007.849	4	*MB*	24943.988	$1873°_{3\,1/2}-26817_{2\,1/2}$	−13
4000.786	12	*MB*	24988.023	$5437°_{3\,1/2}-30425_{2\,1/2}$	96	4008.401	10	*MB*	24940.553		
4001.046	80	*MB*	24986.399	$5716°_{3\,1/2}-30702_{4\,1/2}$	6	4008.446	12	*MB*	24940.273	$3745°_{1\,1/2}-28685_{2\,1/2}$	−9
4001.276	6	*MB*	24984.963	$7522°_{0\,1/2}-32507_{1\,1/2}$	−20	4008.581	4	*MB*	24939.433		
4001.322	5	*MB*	24984.676			4008.597	5	*MB*	24939.333		
4001.360	7	*MB*	24984.439	$7878°_{3\,1/2}-32862_{3\,1/2}$	0	4008.663	30	*MB*	24938.923	$7259°_{3\,1/2}-32197_{4\,1/2}$	16
4001.492	30	*MB*	24983.614	$20881_{6\,1/2}-45864°_{5\,1/2}$	0	4008.714	2	*MB*	24938.606		
4001.562	160	*MB*	24983.177	$5010°_{2\,1/2}-29994_{2\,1/2}$	7	4008.741	8	*MB*	24938.438	$4511°_{2\,1/2}-29449_{1\,1/2}$	−82
4001.724	100	*MB*	24982.166	$3703°_{3\,1/2}-28685_{2\,1/2}$	2	4009.018	20	*MB*	24936.715		
4001.867	6	*MB*	24981.273			4009.115	40	*MB*	24936.111	$12260°_{3\,1/2}-37196_{4\,1/2}$	60
4001.887	5	*MB*	24981.148							$7202°_{2\,1/2}-32138_{2\,1/2}$	−57
4001.983	1	*MB*	24980.549			4009.287	3	*MB*	24935.041		
4002.106	1	*MB*	24979.782			4009.449	4	*MB*	24934.034	$3363°_{2\,1/2}-28297_{3\,1/2}$	−11
4002.251	10	*MB*	24978.877	$8169°_{1\,1/2}-33148_{2\,1/2}$	−13	4009.553	5	*MB*	24933.387	$2581°_{4\,1/2}-27514_{3\,1/2}$	−15
4002.304	4	*MB*	24978.546			4009.598	4	*MB*	24933.107		
4002.553	3	*MB*	24976.992			4009.998	5	*MB*	24930.620		
4002.594	3	*MB*	24976.736	$13217_{3\,1/2}-38194°_{4\,1/2}$	−15	4010.016	8	*MB*	24930.508		
4002.740	3	*MB*	24975.825			4010.136	100	*MB*	24929.762	$6638°_{4\,1/2}-31568_{4\,1/2}$	2
4002.827	130	*MB*	24975.282	$7293°_{6\,1/2}-32269_{7\,1/2}$	−31	4010.176	4	*MB*	24929.514		
4002.936	9	*MB*	24974.602	$11949°_{3\,1/2}-36923_{4\,1/2}$	2	4010.755	6	*MB*	24925.915		
4002.969	80	*MB*	24974.396	$3363°_{2\,1/2}-28337_{2\,1/2}$	9	4010.789	7	*MB*	24925.704	$16159°_{3\,1/2}-41085_{3\,1/2}$	26
4003.160	80	*MB*	24973.205	$5010°_{2\,1/2}-29984_{1\,1/2}$	23	4010.978	2	*MB*	24924.529		
4003.392	2	*MB*	24971.758			4011.102	6	*MB*	24923.759	$16159°_{3\,1/2}-41083_{4\,1/2}$	1
4003.600	12	*MB*	24970.460	$7746°_{2\,1/2}-32716_{2\,1/2}$	−1	4011.119	10	*MB*	24923.653		
4003.676	5	*MB*	24969.986			4011.224	2	*MB*	24923.000		
4003.769	650	*MB*	24969.406	$7522°_{5\,1/2}-32492_{5\,1/2}$	−10	4011.385	1	*MB*	24922.000		
4003.874	4	*MB*	24968.751			4011.557	70	*MB*	24920.932	$5716°_{3\,1/2}-30637_{2\,1/2}$	−8
4004.032	40	*MB*	24967.766	$16133_{2\,1/2}-41100°_{2\,1/2}$	28	4011.737	4	*MB*	24919.814		
4004.083	10	*MB*	24967.448	$1873°_{3\,1/2}-26841_{4\,1/2}$	−1	4012.042	8	*MB*	24917.919		
4004.132	10	*MB*	24967.143			4012.150	15	*MB*	24917.249	$10641°_{2\,1/2}-35558_{3\,1/2}$	−10
4004.151	15	*MB*	24967.024			4012.387	1900	*MB*	24915.777	$4523°_{4\,1/2}-29438_{5\,1/2}$	−6
4004.580	70	*MB*	24964.350	$7233°_{5\,1/2}-32197_{4\,1/2}$	−4	4012.595	3	*MB*	24914.485		
4004.843	15	*MB*	24962.710			4012.627	2	*MB*	24914.287		
4005.009	2	*MB*	24961.676	$13012°_{2\,1/2}-37973_{3\,1/2}$	−4	4012.771	3	*MB*	24913.393		
4005.152	3	*MB*	24960.784			4012.919	5	*MB*	24912.474		
4005.498	8	*MB*	24958.628	$4322°_{2\,1/2}-29281_{2\,1/2}$	−37	4013.032	1	*MB*	24911.772	$19982_{4\,1/2}-44893°_{3\,1/2}$	21
4005.536	4	*MB*	24958.391			4013.221	6	*MB*	24910.599		
4005.634	260	*MB*	24957.781	$987°_{4\,1/2}-25945_{3\,1/2}$	−3	4013.523	4	*MB*	24908.725	$14963°_{5\,1/2}-39871_{4\,1/2}$	−7
4005.757	8	*MB*	24957.014	$9198°_{3\,1/2}-34155_{3\,1/2}$	30	4013.617	15	*MB*	24908.141		
4005.874	2	*MB*	24956.286			4014.057	2	*MB*	24905.411		
4006.286	40	*MB*	24953.719			4014.077	3	*MB*	24905.287		
4006.468	5	*MB*	24952.586			4014.151	12	*MB*	24904.828	$4459°_{3\,1/2}-29364_{3\,1/2}$	−39
4006.586	7	*MB*	24951.851			4014.201	3	*MB*	24904.518		
4006.604	10	*MB*	24951.739			4014.234	2	*MB*	24904.313		

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TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4014.344	10	*MB*	24903.631	$8175°_{2\,1/2}-33079_{3\,1/2}$	−17	4021.421	10	*MB*	24859.805	$7278°_{1\,1/2}-32138_{2\,1/2}$	30
4014.606	3	*MB*	24902.005			4021.712	2	*MB*	24858.007	$8131_{4\,1/2}-32989°_{3\,1/2}$	6
4014.675	2	*MB*	24901.577			4021.744	2	*MB*	24857.809		
4014.716	4	*MB*	24901.323			4021.989	2	*MB*	24856.295		
4014.897	650	*MB*	24900.201	$4266°_{3\,1/2}-29166_{4\,1/2}$	1	4022.095	5	*MB*	24855.640		
4015.174	10	*MB*	24898.483	$7818°_{1\,1/2}-32716_{2\,1/2}$	−16	4022.177	2	*MB*	24855.133		
4015.544	5	*MB*	24896.189	$9269°_{0\,1/2}-34166_{1\,1/2}$	−23	4022.269	170	*MB*	24854.565	$9053_{3\,1/2}-33908°_{4\,1/2}$	1
4015.718	10	*MB*	24895.110	$11949°_{3\,1/2}-36844_{2\,1/2}$	−5	4022.443	20	*MB*	24853.489	$4511°_{2\,1/2}-29364_{3\,1/2}$	7
4015.823	5	*MB*	24894.459			4022.509	2	*MB*	24853.082		
4015.877	180	*MB*	24894.124	$8402°_{3\,1/2}-33296_{4\,1/2}$	−12	4022.769	12	*MB*	24851.475	$6517°_{2\,1/2}-31369_{2\,1/2}$	2
4016.022	6	*MB*	24893.226	$10035°_{5\,1/2}-34928_{4\,1/2}$	−31	4022.979	12	*MB*	24850.178	$8702°_{1\,1/2}-33552_{2\,1/2}$	40
4016.061	10	*MB*	24892.984			4023.106	2	*MB*	24849.394		
4016.106	20	*MB*	24892.705	$16192°_{4\,1/2}-41085_{3\,1/2}$	−42	4023.164	3	*MB*	24849.036		
4016.225	8	*MB*	24891.967	$7746°_{2\,1/2}-32638_{1\,1/2}$	−12	4023.369	25	*MB*	24847.769	$6521°_{1\,1/2}-31369_{2\,1/2}$	9
4016.423	7	*MB*	24890.740	$16192°_{4\,1/2}-41083_{4\,1/2}$	−87	4023.637	12	*MB*	24846.114	$9198°_{3\,1/2}-34044_{4\,1/2}$	0
4016.472	6	*MB*	24890.436			4023.699	6	*MB*	24845.732	$10088°_{1\,1/2}-34934_{2\,1/2}$	−50
4016.537	2	*MB*	24890.034	$9269°_{0\,1/2}-34159_{0\,1/2}$	−16	4023.979	7	*MB*	24844.003		
4016.710	3	*MB*	24888.962			4024.118	3	*MB*	24843.145		
4016.772	1	*MB*	24888.578			4024.349	100	*MB*	24841.719	$4523°_{4\,1/2}-29364_{3\,1/2}$	12
4017.060	2	*MB*	24886.793			4024.487	600	*MB*	24840.867	$3793°_{6\,1/2}-28634_{5\,1/2}$	−14
4017.135	12	*MB*	24886.329	$5942°_{3\,1/2}-30829_{3\,1/2}$	3	4024.532	6	*MB*	24840.589		
4017.500	15	*MB*	24884.068	$8927°_{5\,1/2}-33811_{4\,1/2}$	15	4024.595	3	*MB*	24840.200		
4017.591	100	*MB*	24883.504	$5819°_{4\,1/2}-30702_{4\,1/2}$	7	4024.746	4	*MB*	24839.268		
4017.748	7	*MB*	24882.532	$13659°_{4\,1/2}-38541_{4\,1/2}$	−11	4024.881	1	*MB*	24838.435		
4017.869	4	*MB*	24881.782			4024.919	7	*MB*	24838.201		
4017.951	5	*MB*	24881.275			4025.142	170	*MB*	24836.825	$3508°_{0\,1/2}-28345_{0\,1/2}$	−20
4018.012	7	*MB*	24880.897			4025.305	25	*MB*	24835.819		
4018.061	12	*MB*	24880.593	$8169°_{1\,1/2}-33050_{1\,1/2}$	1	4025.454	2	*MB*	24834.900		
4018.158	10	*MB*	24879.993	$2634°_{2\,1/2}-27514_{3\,1/2}$	0	4025.622	3	*MB*	24833.863		
4018.218	15	*MB*	24879.621	$7259°_{3\,1/2}-32138_{2\,1/2}$	−1	4025.888	25	*MB*	24832.223	$16268_{1\,1/2}-41100°_{2\,1/2}$	−35
4018.384	15	*MB*	24878.594	$7059°_{4\,1/2}-31937_{3\,1/2}$	13	4025.981	1	*MB*	24831.649		
4018.438	2	*MB*	24878.259			4026.251	12	*MB*	24829.984		
4018.900	6	*MB*	24875.399	$8169°_{1\,1/2}-33045_{2\,1/2}$	3	4026.388	10	*MB*	24829.139	$4844°_{1\,1/2}-29673_{2\,1/2}$	13
4018.926	2	*MB*	24875.239	$5118°_{2\,1/2}-29994_{2\,1/2}$	4	4026.663	2	*MB*	24827.443	$4201°_{1\,1/2}-29029_{1\,1/2}$	−16
4019.050	140	*MB*	24874.471	$8175°_{2\,1/2}-33050_{1\,1/2}$	43	4026.750	3	*MB*	24826.907	$2879°_{5\,1/2}-27706_{6\,1/2}$	−28
4019.268	20	*MB*	24873.122	$2641°_{3\,1/2}-27514_{3\,1/2}$	21	4026.789	3	*MB*	24826.666		
4019.470	20	*MB*	24871.872	$7059°_{4\,1/2}-31930_{4\,1/2}$	8	4026.925	12	*MB*	24825.828	$12762°_{4\,1/2}-37588_{3\,1/2}$	−3
4019.794	2	*MB*	24869.867			4027.044	50	*MB*	24825.094	$6913°_{6\,1/2}-31738_{5\,1/2}$	3
4019.894	100	*MB*	24869.249	$8175°_{2\,1/2}-33045_{2\,1/2}$	17	4027.203	8	*MB*	24824.114		
4020.002	12	*MB*	24868.580			4027.628	20	*MB*	24821.495	$4459°_{3\,1/2}-29281_{2\,1/2}$	−6
4020.152	7	*MB*	24867.653	$8280°_{2\,1/2}-33148_{2\,1/2}$	10	4027.691	120	*MB*	24821.107	$17171°_{5\,1/2}-41992_{6\,1/2}$	−3
4020.254	8	*MB*	24867.022							$5924°_{1\,1/2}-30745_{1\,1/2}$	25
4020.349	4	*MB*	24866.434			4027.867	30	*MB*	24820.022	$7818°_{1\,1/2}-32638_{1\,1/2}$	4
4020.543	15	*MB*	24865.234	$5118°_{2\,1/2}-29984_{1\,1/2}$	−11	4027.998	30	*MB*	24819.215	$6549°_{2\,1/2}-31369_{2\,1/2}$	30
4020.645	2	*MB*	24864.603			4028.199	20	*MB*	24817.976	$6389°_{4\,1/2}-31207_{3\,1/2}$	−8
4020.718	3	*MB*	24864.152	$5964°_{3\,1/2}-30829_{3\,1/2}$	−75	4028.404	600	*MB*	24816.713	$2563°_{5\,1/2}-27379_{5\,1/2}$	−2
4020.745	3	*MB*	24863.985			4028.537	20	*MB*	24815.894	$10641°_{2\,1/2}-35457_{1\,1/2}$	18
4020.932	12	*MB*	24862.829			4028.707	5	*MB*	24814.847	$11387°_{3\,1/2}-36202_{4\,1/2}$	21
4021.075	10	*MB*	24861.945	$11340°_{3\,1/2}-36202_{4\,1/2}$	−13	4028.810	2	*MB*	24814.213		
4021.366	2	*MB*	24860.146			4028.948	5	*MB*	24813.363		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4029.032	2	*MB*	24812.845			4036.105	10	*MB*	24769.363	$8280°_{2\,1/2}-33050_{1\,1/2}$	19
4029.257	30	*MB*	24811.460			4036.242	10	*MB*	24768.523		
4029.566	1	*MB*	24809.557			4036.462	10	*MB*	24767.173		
4029.681	8	*MB*	24808.849			4036.499	30	*MB*	24766.946		
4029.749	15	*MB*	24808.431	$5437°_{3\,1/2}-30245_{4\,1/2}$	−24	4036.645	5	*MB*	24766.050	$12466°_{1\,1/2}-37232_{1\,1/2}$	42
4030.157	40	*MB*	24805.919	$10114°_{2\,1/2}-34920_{3\,1/2}$	14	4036.832	2	*MB*	24764.903		
4030.342	180	*MB*	24804.781	$8789_{2\,1/2}-33594°_{2\,1/2}$	9	4036.965	15	*MB*	24764.087	$8280°_{2\,1/2}-33045_{2\,1/2}$	−61
				$2382°_{4\,1/2}-27187_{3\,1/2}$	−19	4037.277	3	*MB*	24762.173		
4030.456	2	*MB*	24804.079			4037.377	40	*MB*	24761.560	$8774_{4\,1/2}-33535°_{3\,1/2}$	−11
4030.502	2	*MB*	24803.796			4037.661	240	*MB*	24759.818	$5942°_{3\,1/2}-30702_{4\,1/2}$	6
4030.587	2	*MB*	24803.273	$10058_{6\,1/2}-34861°_{5\,1/2}$	−26	4037.766	3	*MB*	24759.174		
4030.744	20	*MB*	24802.307			4037.925	3	*MB*	24758.199		
4030.985	20	*MB*	24800.824			4037.972	10	*MB*	24757.911	$15281_{6\,1/2}-40039°_{6\,1/2}$	−10
4031.142	1	*MB*	24799.858			4038.255	120	*MB*	24756.176	$10869_{4\,1/2}-35625°_{3\,1/2}$	18
4031.178	3	*MB*	24799.637			4038.751	5	*MB*	24753.136		
4031.332	600	*MB*	24798.689	$2581°_{4\,1/2}-27379_{5\,1/2}$	−2	4038.818	1	*MB*	24752.725		
4031.429	3	*MB*	24798.092			4038.902	1	*MB*	24752.211		
4031.500	5	*MB*	24797.656			4039.068	8	*MB*	24751.193		
4031.608	12	*MB*	24796.992	$11340°_{3\,1/2}-36137_{2\,1/2}$	−13	4039.193	2	*MB*	24750.427		
4031.686	5	*MB*	24796.512			4039.285	10	*MB*	24749.864	$11387°_{3\,1/2}-36137_{2\,1/2}$	−8
4031.737	5	*MB*	24796.198	$5010°_{2\,1/2}-29807_{3\,1/2}$	−9	4039.502	1	*MB*	24748.534		
4031.773	2	*MB*	24795.977			4039.527	4	*MB*	24748.381		
4032.004	5	*MB*	24794.556			4039.723	5	*MB*	24747.180		
4032.036	4	*MB*	24794.359			4039.873	60	*MB*	24746.261	$8789_{2\,1/2}-33535°_{3\,1/2}$	6
4032.167	4	*MB*	24793.555			4039.927	15	*MB*	24745.931	$8402°_{3\,1/2}-33148_{2\,1/2}$	10
4032.252	7	*MB*	24793.031			4040.187	5	*MB*	24744.338		
4032.373	6	*MB*	24792.287	$13012°_{2\,1/2}-37804_{1\,1/2}$	−51	4040.210	2	*MB*	24744.197	$13784°_{1\,1/2}-38529_{2\,1/2}$	11
4032.417	3	*MB*	24792.017	$7522°_{0\,1/2}-32314_{0\,1/2}$	6	4040.304	1	*MB*	24743.622	$10454°_{1\,1/2}-35197_{1\,1/2}$	54
4032.451	4	*MB*	24791.808	$9634°_{1\,1/2}-34426_{2\,1/2}$	−42	4040.398	2	*MB*	24743.046		
4032.548	20	*MB*	24791.211	$10924°_{4\,1/2}-35716_{5\,1/2}$	5	4040.439	2	*MB*	24742.795		
4032.592	6	*MB*	24790.941			4040.524	3	*MB*	24742.274		
4032.810	1	*MB*	24789.601			4040.579	2	*MB*	24741.938		
4032.952	2	*MB*	24788.728			4040.752	1500	*MB*	24740.878	$3593°_{4\,1/2}-28334_{4\,1/2}$	5
4033.006	5	*MB*	24788.396			4040.854	6	*MB*	24740.254		
4033.194	5	*MB*	24787.241	$12057°_{2\,1/2}-36844_{2\,1/2}$	43	4041.206	5	*MB*	24738.099	$14097_{3\,1/2}-38835°_{2\,1/2}$	59
4033.276	2	*MB*	24786.737			4041.267	80	*MB*	24737.726	$5964°_{3\,1/2}-30702_{4\,1/2}$	12
4033.349	10	*MB*	24786.288	$11325°_{2\,1/2}-36112_{3\,1/2}$	48	4041.336	10	*MB*	24737.303		
4033.606	2	*MB*	24784.709			4041.361	10	*MB*	24737.150		
4033.750	5	*MB*	24783.824			4041.383	3	*MB*	24737.016	$9269°_{0\,1/2}-34006_{0\,1/2}$	20
4033.780	15	*MB*	24783.640	$5010°_{2\,1/2}-29794_{3\,1/2}$	−6	4041.694	3	*MB*	24735.112	$7202°_{2\,1/2}-31937_{3\,1/2}$	−11
4034.033	1	*MB*	24782.085			4041.740	4	*MB*	24734.831		
4034.152	3	*MB*	24781.354			4042.028	1	*MB*	24733.068	$8131_{4\,1/2}-32864°_{5\,1/2}$	8
4034.694	6	*MB*	24778.026			4042.127	40	*MB*	24732.463	$8927°_{5\,1/2}-33659_{5\,1/2}$	9
4035.158	2	*MB*	24775.176			4042.578	650	*MB*	24729.703	$3995°_{3\,1/2}-28725_{4\,1/2}$	16
4035.364	10	*MB*	24773.912			4042.781	12	*MB*	24728.462		
4035.415	2	*MB*	24773.599			4042.902	5	*MB*	24727.722		
4035.531	12	*MB*	24772.887	$10684°_{0\,1/2}-35457_{1\,1/2}$	10	4043.034	3	*MB*	24726.914		
4035.765	3	*MB*	24771.450	$11340°_{3\,1/2}-36112_{3\,1/2}$	27	4043.473	20	*MB*	24724.230	$5455°_{7\,1/2}-30180_{6\,1/2}$	−20
4035.887	8	*MB*	24770.701			4043.560	8	*MB*	24723.698		
4035.980	8	*MB*	24770.131	$4511°_{2\,1/2}-29281_{2\,1/2}$	14	4043.577	5	*MB*	24723.594		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4043.997	9	*MB*	24721.026			4052.054	20	*MB*	24671.873	$7259°_{3\,1/2}-31930_{4\,1/2}$	12
4044.373	1	*MB*	24718.728			4052.280	12	*MB*	24670.497		
4044.564	8	*MB*	24717.561			4052.456	1	*MB*	24669.425		
4044.802	2	*MB*	24716.106			4052.628	12	*MB*	24668.378	$9491°_{0\,1/2}-34159_{0\,1/2}$	−5
4045.128	3	*MB*	24714.114			4052.702	10	*MB*	24667.928	$13784°_{1\,1/2}-38452_{1\,1/2}$	12
4045.217	160	*MB*	24713.571	$6521°_{1\,1/2}-31234_{2\,1/2}$	24	4052.775	10	*MB*	24667.483	$13527_{4\,1/2}-38194°_{4\,1/2}$	−5
4045.318	60	*MB*	24712.954	$5924°_{1\,1/2}-30637_{2\,1/2}$	1	4052.824	8	*MB*	24667.185	$7746°_{2\,1/2}-32413_{3\,1/2}$	25
4045.407	15	*MB*	24712.410	$4737°_{2\,1/2}-29449_{1\,1/2}$	5	4053.066	15	*MB*	24665.712	$16192°_{4\,1/2}-40858_{4\,1/2}$	−26
4045.474	2	*MB*	24712.001			4053.268	2	*MB*	24664.483		
4045.609	8	*MB*	24711.176			4053.500	500	*MB*	24663.072	$0°_{3\,1/2}-24663_{4\,1/2}$	17
4045.944	25	*MB*	24709.130	$5716°_{3\,1/2}-30425_{2\,1/2}$	−2	4054.092	12	*MB*	24659.470	$10274°_{3\,1/2}-34934_{2\,1/2}$	18
4046.028	12	*MB*	24708.617			4054.205	10	*MB*	24658.783	$10798°_{2\,1/2}-35457_{1\,1/2}$	20
4046.129	50	*MB*	24708.000			4054.333	10	*MB*	24658.004	$6549°_{2\,1/2}-31207_{3\,1/2}$	−14
4046.337	440	*MB*	24706.730	$4459°_{3\,1/2}-29166_{4\,1/2}$	6	4054.424	4	*MB*	24657.451	$20940_{3\,1/2}-45598°_{3\,1/2}$	−10
4046.737	10	*MB*	24704.288	$7061°_{0\,1/2}-31766_{1\,1/2}$	18	4054.478	4	*MB*	24657.123		
4046.850	15	*MB*	24703.598	$3593°_{4\,1/2}-28297_{3\,1/2}$	8	4054.787	8	*MB*	24655.244		
4047.176	5	*MB*	24701.609			4054.898	2	*MB*	24654.569		
4047.269	90	*MB*	24701.041	$5283°_{0\,1/2}-29984_{1\,1/2}$	18	4054.987	320	*MB*	24654.028	$2595°_{1\,1/2}-27249_{2\,1/2}$	3
4047.396	15	*MB*	24700.266	$7713°_{4\,1/2}-32413_{3\,1/2}$	9	4055.185	60	*MB*	24652.824	$10114°_{2\,1/2}-34767_{1\,1/2}$	16
4047.565	1	*MB*	24699.235			4055.708	10	*MB*	24649.645		
4047.616	12	*MB*	24698.924	$9634°_{1\,1/2}-34333_{2\,1/2}$	12	4055.764	12	*MB*	24649.305	$6521°_{1\,1/2}-31170_{1\,1/2}$	−7
4047.661	10	*MB*	24698.649	$16159°_{3\,1/2}-40858_{4\,1/2}$	−19	4056.137	10	*MB*	24647.038	$9778°_{2\,1/2}-34426_{2\,1/2}$	−12
4047.714	10	*MB*	24698.325	$10114°_{2\,1/2}-34813_{2\,1/2}$	7	4056.245	15	*MB*	24646.382	$16454_{2\,1/2}-41100°_{2\,1/2}$	5
4047.880	10	*MB*	24697.313	$7233°_{5\,1/2}-31930_{4\,1/2}$	4	4056.334	15	*MB*	24645.841	$10274°_{3\,1/2}-34920_{3\,1/2}$	24
4048.038	3	*MB*	24696.349			4056.384	5	*MB*	24645.537		
4048.105	2	*MB*	24695.940			4056.670	2	*MB*	24643.800		
4048.336	7	*MB*	24694.531			4056.707	10	*MB*	24643.575	$4523°_{4\,1/2}-29166_{4\,1/2}$	11
4048.367	20	*MB*	24694.342	$5942°_{3\,1/2}-30637_{2\,1/2}$	−16	4056.894	60	*MB*	24642.439	$8402°_{3\,1/2}-33045_{2\,1/2}$	12
4048.722	2	*MB*	24692.176	$14387_{4\,1/2}-39079°_{5\,1/2}$	−9	4057.295	15	*MB*	24640.003	$13012°_{2\,1/2}-37652_{2\,1/2}$	8
4048.936	2	*MB*	24690.872			4057.482	2	*MB*	24638.868		
4049.028	80	*MB*	24690.310	$6517°_{2\,1/2}-31207_{3\,1/2}$	3	4057.741	4	*MB*	24637.295		
				$3995°_{3\,1/2}-28685_{2\,1/2}$	13	4057.890	30	*MB*	24636.391		
4049.092	3	*MB*	24689.920			4058.248	60	*MB*	24634.217	$3703°_{3\,1/2}-28337_{2\,1/2}$	−2
4049.192	30	*MB*	24689.310	$7818°_{1\,1/2}-32507_{1\,1/2}$	16	4058.751	35	*MB*	24631.164	$3703°_{3\,1/2}-28334_{4\,1/2}$	3
4049.362	30	*MB*	24688.274	$5118°_{2\,1/2}-29807_{3\,1/2}$	2	4058.928	3	*MB*	24630.090		
4049.536	10	*MB*	24687.213	$19950_{6\,1/2}-44637°_{6\,1/2}$	5	4059.308	9	*MB*	24627.785	$5437°_{3\,1/2}-30065_{3\,1/2}$	43
4049.582	10	*MB*	24686.933	$8175°_{2\,1/2}-32862_{3\,1/2}$	29	4059.375	12	*MB*	24627.378	$4737°_{2\,1/2}-29364_{3\,1/2}$	12
4049.790	20	*MB*	24685.665	$6389°_{4\,1/2}-31075_{4\,1/2}$	4	4059.630	15	*MB*	24625.831	$27432°_{4\,1/2}-52058_{4\,1/2}$	27
4049.904	2	*MB*	24684.970	$6549°_{2\,1/2}-31234_{2\,1/2}$	0	4059.759	2	*MB*	24625.049		
4050.103	3	*MB*	24683.757			4059.881	2	*MB*	24624.309		
4050.316	5	*MB*	24682.459			4059.959	2	*MB*	24623.836		
4050.591	3	*MB*	24680.783			4060.033	1	*MB*	24623.387		
4050.726	4	*MB*	24679.961			4060.070	3	*MB*	24623.163		
4050.817	60	*MB*	24679.406	$7059°_{4\,1/2}-31738_{5\,1/2}$	−5	4060.467	80	*MB*	24620.755	$6549°_{2\,1/2}-31170_{1\,1/2}$	19
4050.949	8	*MB*	24678.602	$7259°_{3\,1/2}-31937_{3\,1/2}$	25	4060.542	1	*MB*	24620.300		
4051.236	12	*MB*	24676.854	$8402°_{3\,1/2}-33079_{3\,1/2}$	10	4060.831	6	*MB*	24618.548	$13515°_{3\,1/2}-38134_{4\,1/2}$	2
4051.424	150	*MB*	24675.709	$5118°_{2\,1/2}-29794_{3\,1/2}$	−1	4061.413	20	*MB*	24615.021	$2634°_{2\,1/2}-27249_{2\,1/2}$	18
4051.615	10	*MB*	24674.546	$9491°_{0\,1/2}-34166_{1\,1/2}$	0	4061.701	12	*MB*	24613.275	$9198°_{3\,1/2}-33811_{4\,1/2}$	34
4051.933	8	*MB*	24672.609	$15803_{4\,1/2}-40475°_{3\,1/2}$	−5	4062.218	200	*MB*	24610.143	$11015_{3\,1/2}-35625°_{3\,1/2}$	22
4051.989	150	*MB*	24672.268	$5964°_{3\,1/2}-30637_{2\,1/2}$	8	4062.556	15	*MB*	24608.095	$2641°_{3\,1/2}-27249_{2\,1/2}$	−14

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4062.938	160	*MB*	24605.782	$2581°_{4\,1/2}-27187_{3\,1/2}$	−7	4074.165	6	*MB*	24537.978	$11387°_{3\,1/2}-35925_{3\,1/2}$	27
4063.044	10	*MB*	24605.140	$4844°_{1\,1/2}-29449_{1\,1/2}$	6	4074.646	20	*MB*	24535.082	$1410°_{4\,1/2}-25945_{3\,1/2}$	−9
4063.328	15	*MB*	24603.420			4074.826	1	*MB*	24533.998		
4063.781	4	*MB*	24600.678			4074.860	3	*MB*	24533.793		
4063.920	80	*MB*	24599.836	$3745°_{1\,1/2}-28345_{0\,1/2}$	−4	4075.012	4	*MB*	24532.878		
4064.621	2	*MB*	24595.594			4075.178	8	*MB*	24531.879	$9634°_{1\,1/2}-34166_{1\,1/2}$	26
4064.700	2	*MB*	24595.116			4075.254	2	*MB*	24531.421		
4064.802	13	*MB*	24594.499	$5651°_{5\,1/2}-30245_{4\,1/2}$	−21	4075.544	15	*MB*	24529.676	$5716°_{3\,1/2}-30245_{4\,1/2}$	14
4064.904	60	*MB*	24593.881	$3703°_{3\,1/2}-28297_{3\,1/2}$	2	4075.698	1100	*MB*	24528.749	$5651°_{5\,1/2}-30180_{6\,1/2}$	10
4065.161	60	*MB*	24592.327	$7259°_{3\,1/2}-31851_{2\,1/2}$	5	4075.844	1100	*MB*	24527.870	$4910°_{5\,1/2}-29438_{5\,1/2}$	16
				$3745°_{1\,1/2}-28337_{2\,1/2}$	−11						
						4076.141	15	*MB*	24526.083		
4065.343	3	*MB*	24591.226	$9316_{3\,1/2}-33908°_{4\,1/2}$	−54	4076.237	150	*MB*	24525.505	$6517°_{2\,1/2}-31043_{2\,1/2}$	15
4066.057	12	*MB*	24586.907	$16133_{2\,1/2}-40720°_{1\,1/2}$	−20	4076.347	3	*MB*	24524.844		
4066.170	15	*MB*	24586.224	$8278_{5\,1/2}-32864°_{5\,1/2}$	0	4076.538	4	*MB*	24523.694		
4066.500	60	*MB*	24584.229	$12260°_{3\,1/2}-36844_{2\,1/2}$	12	4076.689	4	*MB*	24522.786		
				$10641°_{2\,1/2}-35225_{2\,1/2}$	15						
						4076.856	15	*MB*	24521.782	$6521°_{1\,1/2}-31043_{2\,1/2}$	4
4066.984	10	*MB*	24581.303			4076.955	2	*MB*	24521.186		
4067.079	10	*MB*	24580.729			4077.073	2	*MB*	24520.477		
4067.284	200	*MB*	24579.490	$8531_{3\,1/2}-33111°_{3\,1/2}$	6	4077.464	300	*MB*	24518.125	$4511°_{2\,1/2}-29029_{1\,1/2}$	29
4067.479	12	*MB*	24578.312							$2382°_{4\,1/2}-26900_{3\,1/2}$	17
4067.766	15	*MB*	24576.578	$14315°_{0\,1/2}-38892_{0\,1/2}$	9	4077.710	5	*MB*	24516.646		
4067.965	1	*MB*	24575.376			4077.932	2	*MB*	24515.311	$9491°_{0\,1/2}-34006_{0\,1/2}$	−17
4068.287	2	*MB*	24573.431			4078.156	2	*MB*	24513.965		
4068.445	60	*MB*	24572.476	$7278°_{1\,1/2}-31851_{2\,1/2}$	2	4078.227	3	*MB*	24513.538		
4068.505	12	*MB*	24572.114	$9723°_{4\,1/2}-34295_{4\,1/2}$	0	4078.317	380	*MB*	24512.997	$7722_{2\,1/2}-32235°_{3\,1/2}$	43
4068.835	300	*MB*	24570.121	$5675°_{4\,1/2}-30245_{4\,1/2}$	6	4078.510	190	*MB*	24511.837	$7454_{1\,1/2}-31966°_{2\,1/2}$	41
4069.913	1	*MB*	24563.613	$7202°_{2\,1/2}-31766_{1\,1/2}$	33	4078.601	60	*MB*	24511.290	$13758°_{1\,1/2}-38269_{0\,1/2}$	−13
4070.092	40	*MB*	24562.533	$20881_{6\,1/2}-45443°_{7\,1/2}$	8					$6521°_{1\,1/2}-31032_{0\,1/2}$	12
4070.242	3	*MB*	24561.628			4078.988	30	*MB*	24508.965	$7059°_{4\,1/2}-31568_{4\,1/2}$	18
4070.844	50	*MB*	24557.996	$12365°_{4\,1/2}-36923_{4\,1/2}$	13	4079.034	30	*MB*	24508.689	$8531_{3\,1/2}-33040°_{4\,1/2}$	14
4070.930	3	*MB*	24557.477			4079.165	4	*MB*	24507.901		
4070.947	3	*MB*	24557.374			4079.273	6	*MB*	24507.253	$5283°_{0\,1/2}-29790_{0\,1/2}$	12
4071.072	60	*MB*	24556.620	$5437°_{3\,1/2}-29994_{2\,1/2}$	2	4079.674	100	*MB*	24504.844	$7233°_{5\,1/2}-31738_{5\,1/2}$	−12
4071.109	20	*MB*	24556.397	$10641°_{2\,1/2}-35197_{1\,1/2}$	0	4079.878	2	*MB*	24503.618		
4071.344	30	*MB*	24554.980	$5118°_{2\,1/2}-29673_{2\,1/2}$	16	4080.227	6	*MB*	24501.523		
4071.484	30	*MB*	24554.136	$9778°_{2\,1/2}-34333_{2\,1/2}$	24	4080.287	30	*MB*	24501.162	$5924°_{1\,1/2}-30425_{2\,1/2}$	18
4071.773	750	*MB*	24552.393	$2634°_{2\,1/2}-27187_{3\,1/2}$	12	4080.355	10	*MB*	24500.754	$0°_{3\,1/2}-24500_{2\,1/2}$	−1
4072.036	6	*MB*	24550.807			4080.436	190	*MB*	24500.268	$2879°_{5\,1/2}-27379_{5\,1/2}$	14
4072.544	10	*MB*	24547.745	$10798°_{2\,1/2}-35346_{3\,1/2}$	18	4080.553	50	*MB*	24499.565	$7059°_{4\,1/2}-31558_{3\,1/2}$	12
4072.661	15	*MB*	24547.040	$8169°_{1\,1/2}-32716_{2\,1/2}$	91	4080.735	10	*MB*	24498.473		
4072.699	8	*MB*	24546.811			4081.219	480	*MB*	24495.567	$3854_{3\,1/2}-28349°_{3\,1/2}$	−2
4072.917	190	*MB*	24545.497	$2641°_{3\,1/2}-27187_{3\,1/2}$	9	4081.608	30	*MB*	24493.233	$6549°_{2\,1/2}-31043_{2\,1/2}$	31
4073.135	2	*MB*	24544.183			4082.097	12	*MB*	24490.299	$5675°_{4\,1/2}-30166_{3\,1/2}$	5
4073.165	7	*MB*	24544.002	$4737°_{2\,1/2}-29281_{2\,1/2}$	1	4082.214	2	*MB*	24489.597		
4073.475	1300	*MB*	24542.134	$3854_{3\,1/2}-28396°_{2\,1/2}$	−3	4082.346	2	*MB*	24488.805		
4073.591	8	*MB*	24541.436			4082.381	8	*MB*	24488.595		
4073.692	10	*MB*	24540.827	$8175°_{2\,1/2}-32716_{2\,1/2}$	43	4082.952	15	*MB*	24485.171	$13784°_{1\,1/2}-38269_{0\,1/2}$	31
4073.738	150	*MB*	24540.550	$9053_{3\,1/2}-33594°_{2\,1/2}$	27	4083.219	650	*MB*	24483.569	$5651°_{5\,1/2}-30134_{5\,1/2}$	17
				$8448_{2\,1/2}-32989°_{3\,1/2}$	−26	4083.388	4	*MB*	24482.556	$5942°_{3\,1/2}-30425_{2\,1/2}$	5
4074.123	15	*MB*	24538.231	$10274°_{3\,1/2}-34813_{2\,1/2}$	0	4083.479	80	*MB*	24482.011	$9053_{3\,1/2}-33535°_{3\,1/2}$	4

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4083.628	80	*MB*	24481.117	$16192°_{4\frac{1}{2}} - 40673_{5\frac{1}{2}}$	8	4092.773	6	*MB*	24426.417		
4083.785	2	*MB*	24480.176	$10454°_{1\frac{1}{2}} - 34934_{2\frac{1}{2}}$	25	4092.825	1	*MB*	24426.107	$18147°_{2\frac{1}{2}} - 42573_{3\frac{1}{2}}$	−78
4083.910	4	*MB*	24479.427			4093.088	2	*MB*	24424.537		
4084.065	5	*MB*	24478.498			4093.120	2	*MB*	24424.346		
4084.092	5	*MB*	24478.336	$13659°_{4\frac{1}{2}} - 38137_{5\frac{1}{2}}$	−16	4093.876	6	*MB*	24419.836	$11387°_{3\frac{1}{2}} - 35807_{4\frac{1}{2}}$	0
4084.187	10	*MB*	24477.767	$10035°_{5\frac{1}{2}} - 34513_{6\frac{1}{2}}$	10	4093.956	110	*MB*	24419.359	$4266°_{3\frac{1}{2}} - 28685_{2\frac{1}{2}}$	−1
4084.475	2	*MB*	24476.041			4094.075	4	*MB*	24418.649		
4084.636	20	*MB*	24475.076	$13659°_{4\frac{1}{2}} - 38134_{4\frac{1}{2}}$	5	4094.460	5	*MB*	24416.353		
4085.234	320	*MB*	24471.493	$5437°_{3\frac{1}{2}} - 29908_{4\frac{1}{2}}$	12	4094.659	8	*MB*	24415.167		
4085.426	5	*MB*	24470.343			4094.808	2	*MB*	24414.278		
4085.672	4	*MB*	24468.870			4095.253	8	*MB*	24411.625	$6549°_{2\frac{1}{2}} - 30961_{1\frac{1}{2}}$	16
4085.740	15	*MB*	24468.463	$8169°_{1\frac{1}{2}} - 32638_{1\frac{1}{2}}$	−3	4095.369	2	*MB*	24410.934		
4086.430	60	*MB*	24464.331	$4266°_{3\frac{1}{2}} - 28730_{3\frac{1}{2}}$	16	4095.732	2	*MB*	24408.771		
4086.768	15	*MB*	24462.308	$8175°_{2\frac{1}{2}} - 32638_{1\frac{1}{2}}$	6	4095.807	15	*MB*	24408.323	$7522°_{5\frac{1}{2}} - 31930_{4\frac{1}{2}}$	9
4087.078	3	*MB*	24460.453	$5964°_{3\frac{1}{2}} - 30425_{2\frac{1}{2}}$	0	4095.858	6	*MB*	24408.020	$4322°_{2\frac{1}{2}} - 28730_{3\frac{1}{2}}$	16
4087.102	15	*MB*	24460.309	$11742°_{5\frac{1}{2}} - 36202_{4\frac{1}{2}}$	−2	4096.263	5	*MB*	24405.606		
4087.171	5	*MB*	24459.896			4096.453	4	*MB*	24404.474		
4087.295	60	*MB*	24459.154	$2382°_{4\frac{1}{2}} - 26841_{4\frac{1}{2}}$	16	4096.605	8	*MB*	24403.569		
				$5675°_{4\frac{1}{2}} - 30134_{5\frac{1}{2}}$	7	4096.832	6	*MB*	24402.217		
4087.360	180	*MB*	24458.765	$4266°_{3\frac{1}{2}} - 28725_{4\frac{1}{2}}$	14	4096.962	2	*MB*	24401.443		
4087.562	50	*MB*	24457.556	$8531_{3\frac{1}{2}} - 32989°_{3\frac{1}{2}}$	17	4097.326	10	*MB*	24399.275	$10798°_{2\frac{1}{2}} - 35197_{1\frac{1}{2}}$	−9
4087.770	3	*MB*	24456.312			4097.546	8	*MB*	24397.965		
4087.826	2	*MB*	24455.977	$14481°_{2\frac{1}{2}} - 38937_{1\frac{1}{2}}$	95	4097.800	4	*MB*	24396.453	$24153_{3\frac{1}{2}} - 48549°_{4\frac{1}{2}}$	−70
4087.997	5	*MB*	24454.954			4098.065	3	*MB*	24394.875		
4088.192	5	*MB*	24453.787	$14625_{5\frac{1}{2}} - 39079°_{5\frac{1}{2}}$	−7	4098.280	9	*MB*	24393.595		
4088.321	8	*MB*	24453.016			4098.458	12	*MB*	24392.536	$7746°_{2\frac{1}{2}} - 32138_{2\frac{1}{2}}$	23
4088.581	30	*MB*	24451.461	$16268_{1\frac{1}{2}} - 40720°_{1\frac{1}{2}}$	12	4098.614	3	*MB*	24391.607		
				$6638°_{4\frac{1}{2}} - 31089_{5\frac{1}{2}}$	−11	4098.981	60	*MB*	24389.423	$5675°_{4\frac{1}{2}} - 30065_{3\frac{1}{2}}$	23
4088.849	160	*MB*	24449.858	$5716°_{3\frac{1}{2}} - 30166_{3\frac{1}{2}}$	18	4099.250	5	*MB*	24387.823		
4088.996	50	*MB*	24448.979	$3363°_{2\frac{1}{2}} - 27812_{2\frac{1}{2}}$	9	4099.378	6	*MB*	24387.062	$9778°_{2\frac{1}{2}} - 34166_{1\frac{1}{2}}$	9
4089.054	6	*MB*	24448.633	$24819_{3\frac{1}{2}} - 49267°_{4\frac{1}{2}}$	−14	4099.573	5	*MB*	24385.902		
4089.147	30	*MB*	24448.077	$3363°_{2\frac{1}{2}} - 27811_{3\frac{1}{2}}$	8	4099.593	2	*MB*	24385.783		
4089.290	8	*MB*	24447.222			4099.741	30	*MB*	24384.903	$9491°_{0\frac{1}{2}} - 33876_{1\frac{1}{2}}$	19
4089.736	50	*MB*	24444.556	$7293°_{6\frac{1}{2}} - 31738_{5\frac{1}{2}}$	10	4100.022	2	*MB*	24383.231		
4089.844	50	*MB*	24443.910	$6517°_{2\frac{1}{2}} - 30961_{1\frac{1}{2}}$	11	4100.423	10	*MB*	24380.847	$10646_{5\frac{1}{2}} - 35026°_{4\frac{1}{2}}$	−26
4090.001	10	*MB*	24442.972			4100.489	15	*MB*	24380.454		
4090.465	90	*MB*	24440.199	$6521°_{1\frac{1}{2}} - 30961_{1\frac{1}{2}}$	14	4100.642	3	*MB*	24379.545		
4090.523	15	*MB*	24439.853	$7878°_{3\frac{1}{2}} - 32318_{3\frac{1}{2}}$	6	4101.110	12	*MB*	24376.763		
4090.685	2	*MB*	24438.885	$5010°_{2\frac{1}{2}} - 29449_{1\frac{1}{2}}$	−22	4101.180	5	*MB*	24376.347	$9778°_{2\frac{1}{2}} - 34155_{3\frac{1}{2}}$	22
4090.852	15	*MB*	24437.887			4101.450	2	*MB*	24374.742		
4090.941	90	*MB*	24437.356	$6638°_{4\frac{1}{2}} - 31075_{4\frac{1}{2}}$	11	4101.563	10	*MB*	24374.070	$987°_{4\frac{1}{2}} - 25361_{4\frac{1}{2}}$	8
4091.044	20	*MB*	24436.740	$8448_{2\frac{1}{2}} - 32885°_{2\frac{1}{2}}$	15	4101.769	320	*MB*	24372.846	$6967_{6\frac{1}{2}} - 31340°_{6\frac{1}{2}}$	1
				$4844°_{1\frac{1}{2}} - 29281_{2\frac{1}{2}}$	11	4102.237	12	*MB*	24370.066		
4091.219	7	*MB*	24435.695	$8280°_{2\frac{1}{2}} - 32716_{2\frac{1}{2}}$	−5	4102.366	50	*MB*	24369.300	$8927°_{5\frac{1}{2}} - 33296_{4\frac{1}{2}}$	9
4091.426	1	*MB*	24434.459			4102.616	8	*MB*	24367.815		
4091.587	8	*MB*	24433.497	$12762°_{4\frac{1}{2}} - 37196_{4\frac{1}{2}}$	0	4102.697	5	*MB*	24367.333		
4091.837	10	*MB*	24432.005	$9723°_{4\frac{1}{2}} - 34155_{3\frac{1}{2}}$	29	4102.839	3	*MB*	24366.490		
4092.080	35	*MB*	24430.554	$4203°_{6\frac{1}{2}} - 28634_{5\frac{1}{2}}$	−27	4103.070	1	*MB*	24365.118		
4092.613	3	*MB*	24427.372			4103.415	5	*MB*	24363.070	$4322°_{2\frac{1}{2}} - 28685_{2\frac{1}{2}}$	20
4092.715	70	*MB*	24426.763	$5819°_{4\frac{1}{2}} - 30245_{4\frac{1}{2}}$	−1	4103.626	15	*MB*	24361.817		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4104.112	15	*MB*	24358.932	$10454°_{1\frac{1}{2}}-34813_{2\frac{1}{2}}$	3	4115.370	300	*MB*	24292.297	$7454_{1\frac{1}{2}}-31747°_{1\frac{1}{2}}$	6
4104.425	35	*MB*	24357.075	$5437°_{3\frac{1}{2}}-29794_{3\frac{1}{2}}$	−19	4115.484	1	*MB*	24291.624		
4104.590	2	*MB*	24356.096	$7202°_{2\frac{1}{2}}-31558_{3\frac{1}{2}}$	0	4116.162	1	*MB*	24287.623		
4104.677	1	*MB*	24355.579			4116.226	1	*MB*	24287.246		
4104.911	2	*MB*	24354.191	$9198°_{3\frac{1}{2}}-33552_{2\frac{1}{2}}$	−64	4117.008	180	*MB*	24282.633	$11015_{3\frac{1}{2}}-35298°_{2\frac{1}{2}}$	22
4104.962	10	*MB*	24353.889	$5010°_{2\frac{1}{2}}-29364_{3\frac{1}{2}}$	19	4117.288	140	*MB*	24280.981	$5964°_{3\frac{1}{2}}-30245_{4\frac{1}{2}}$	0
4104.995	180	*MB*	24353.693	$8531_{3\frac{1}{2}}-32885°_{2\frac{1}{2}}$	4	4117.583	140	*MB*	24279.242	$6549°_{2\frac{1}{2}}-30829_{3\frac{1}{2}}$	26
4105.487	1	*MB*	24350.774	$14481°_{2\frac{1}{2}}-38832_{2\frac{1}{2}}$	−4	4117.821	5	*MB*	24277.839	$5716°_{3\frac{1}{2}}-29994_{2\frac{1}{2}}$	14
4105.525	1	*MB*	24350.549			4117.985	10	*MB*	24276.872	$5969°_{5\frac{1}{2}}-30245_{4\frac{1}{2}}$	1
4105.792	1	*MB*	24348.965	$5716°_{3\frac{1}{2}}-30065_{3\frac{1}{2}}$	18	4118.141	550	*MB*	24275.952	$5616_{4\frac{1}{2}}-29892°_{3\frac{1}{2}}$	14
4105.972	1	*MB*	24347.898	$8702°_{1\frac{1}{2}}-33050_{1\frac{1}{2}}$	51	4118.251	3	*MB*	24275.304	$8804°_{4\frac{1}{2}}-33079_{3\frac{1}{2}}$	16
4106.046	1	*MB*	24347.459			4118.635	2	*MB*	24273.040	$15565°_{2\frac{1}{2}}-39838_{2\frac{1}{2}}$	16
4106.131	50	*MB*	24346.955	$5819°_{4\frac{1}{2}}-30166_{3\frac{1}{2}}$	12	4119.007	180	*MB*	24270.848	$4459°_{3\frac{1}{2}}-28730_{3\frac{1}{2}}$	8
4106.213	4	*MB*	24346.469			4119.064	2	*MB*	24270.513	$5010°_{2\frac{1}{2}}-29281_{2\frac{1}{2}}$	9
4106.572	1	*MB*	24344.341			4119.780	220	*MB*	24266.295	$8774_{4\frac{1}{2}}-33040°_{4\frac{1}{2}}$	6
4106.841	50	*MB*	24342.746	$16133_{2\frac{1}{2}}-40475°_{3\frac{1}{2}}$	15	4119.881	220	*MB*	24265.700	$2634°_{2\frac{1}{2}}-26900_{3\frac{1}{2}}$	12
4106.905	40	*MB*	24342.367	$3995°_{3\frac{1}{2}}-28337_{2\frac{1}{2}}$	13	4119.954	6	*MB*	24265.270	$4459°_{3\frac{1}{2}}-28725_{4\frac{1}{2}}$	−5
4107.175	2	*MB*	24340.767	$3593°_{4\frac{1}{2}}-27934_{4\frac{1}{2}}$	11	4120.542	2	*MB*	24261.807		
4107.421	360	*MB*	24339.309	$3995°_{3\frac{1}{2}}-28334_{4\frac{1}{2}}$	13	4120.639	1	*MB*	24261.236		
4107.741	4	*MB*	24337.413	$10088°_{1\frac{1}{2}}-34426_{2\frac{1}{2}}$	16	4120.783	5	*MB*	24260.388	$7878°_{3\frac{1}{2}}-32138_{2\frac{1}{2}}$	18
4107.799	35	*MB*	24337.069	$8774_{4\frac{1}{2}}-33111°_{3\frac{1}{2}}$	−29	4120.828	320	*MB*	24260.123	$2581°_{4\frac{1}{2}}-26841_{4\frac{1}{2}}$	−3
4108.249	18	*MB*	24334.403	$7233°_{5\frac{1}{2}}-31568_{4\frac{1}{2}}$	12	4120.894	2	*MB*	24259.735	$10035°_{5\frac{1}{2}}-34295_{4\frac{1}{2}}$	−3
4108.479	2	*MB*	24333.041	$7011_{4\frac{1}{2}}-31344°_{3\frac{1}{2}}$	17	4121.055	2	*MB*	24258.787	$2641°_{3\frac{1}{2}}-26900_{3\frac{1}{2}}$	−7
4108.539	2	*MB*	24332.686	$13515°_{3\frac{1}{2}}-37848_{2\frac{1}{2}}$	−10	4121.266	4	*MB*	24257.545	$5651°_{5\frac{1}{2}}-29908_{4\frac{1}{2}}$	−1
4108.722	8	*MB*	24331.602	$8175°_{2\frac{1}{2}}-32507_{1\frac{1}{2}}$	23	4121.529	1	*MB*	24255.997	$25361_{4\frac{1}{2}}-49617°_{5\frac{1}{2}}$	−28
4108.826	1	*MB*	24330.986	$5118°_{2\frac{1}{2}}-29449_{1\frac{1}{2}}$	15	4121.589	10	*MB*	24255.644	$4910°_{5\frac{1}{2}}-29166_{4\frac{1}{2}}$	10
4108.954	1	*MB*	24330.228	$13012°_{2\frac{1}{2}}-37342_{2\frac{1}{2}}$	−3	4121.681	2	*MB*	24255.103		
4109.246	1	*MB*	24328.500			4121.783	2	*MB*	24254.502		
4109.433	2	*MB*	24327.392			4121.900	4	*MB*	24253.814	$9723°_{4\frac{1}{2}}-33977_{3\frac{1}{2}}$	9
4109.541	30	*MB*	24326.753	$3508°_{0\frac{1}{2}}-27835_{1\frac{1}{2}}$	−9	4121.975	1	*MB*	24253.373	$11949°_{3\frac{1}{2}}-36202_{4\frac{1}{2}}$	5
4109.664	2	*MB*	24326.025			4122.144	1	*MB*	24252.378		
4110.026	4	*MB*	24323.882	$3793°_{6\frac{1}{2}}-28117_{7\frac{1}{2}}$	−2	4122.642	2	*MB*	24249.449		
4110.376	140	*MB*	24321.811	$8789_{2\frac{1}{2}}-33111°_{3\frac{1}{2}}$	29	4122.872	1	*MB*	24248.096	$7092_{5\frac{1}{2}}-31340°_{6\frac{1}{2}}$	−31
4110.490	2	*MB*	24321.137	$9723°_{4\frac{1}{2}}-34044_{4\frac{1}{2}}$	31	4122.965	1	*MB*	24247.549		
4110.589	3	*MB*	24320.551	$7818°_{1\frac{1}{2}}-32138_{2\frac{1}{2}}$	0	4123.029	10	*MB*	24247.173		
4110.837	50	*MB*	24319.084	$2581°_{4\frac{1}{2}}-26900_{3\frac{1}{2}}$	−12	4123.234	360	*MB*	24245.967	$5118°_{2\frac{1}{2}}-29364_{3\frac{1}{2}}$	33
4111.390	180	*MB*	24315.813	$5819°_{4\frac{1}{2}}-30134_{5\frac{1}{2}}$	16	4123.489	360	*MB*	24244.468	$7722_{2\frac{1}{2}}-31966°_{2\frac{1}{2}}$	5
4111.624	1	*MB*	24314.429	$13659°_{4\frac{1}{2}}-37973_{3\frac{1}{2}}$	−17					$10088°_{1\frac{1}{2}}-34333_{2\frac{1}{2}}$	10
4111.687	1	*MB*	24314.056	$8402°_{3\frac{1}{2}}-32716_{2\frac{1}{2}}$	78	4123.873	700	*MB*	24242.210	$6913°_{6\frac{1}{2}}-31155_{6\frac{1}{2}}$	−20
4111.922	25	*MB*	24312.667	$6389°_{4\frac{1}{2}}-30702_{4\frac{1}{2}}$	0	4124.342	4	*MB*	24239.454		
4112.240	1	*MB*	24310.787			4124.784	360	*MB*	24236.856	$5513_{5\frac{1}{2}}-29750°_{5\frac{1}{2}}$	18
4112.807	1	*MB*	24307.435			4124.996	2	*MB*	24235.611		
4113.332	2	*MB*	24304.333	$9269°_{0\frac{1}{2}}-33574_{1\frac{1}{2}}$	15	4125.047	2	*MB*	24235.311		
4113.544	9	*MB*	24303.080	$5942°_{3\frac{1}{2}}-30245_{4\frac{1}{2}}$	1	4125.188	1	*MB*	24234.483		
4113.722	70	*MB*	24302.029	$3995°_{3\frac{1}{2}}-28297_{3\frac{1}{2}}$	16	4125.387	7	*MB*	24233.313		
4114.139	35	*MB*	24299.566	$7259°_{3\frac{1}{2}}-31558_{3\frac{1}{2}}$	15	4125.422	20	*MB*	24233.108	$5675°_{4\frac{1}{2}}-29908_{4\frac{1}{2}}$	−32
4114.193	2	*MB*	24299.247			4125.451	7	*MB*	24232.938	$11325°_{2\frac{1}{2}}-35558_{3\frac{1}{2}}$	17
4114.490	1	*MB*	24297.493			4125.644	5	*MB*	24231.804		
4114.527	1	*MB*	24297.275			4125.778	35	*MB*	24231.017	$3703°_{3\frac{1}{2}}-27934_{4\frac{1}{2}}$	−26
4114.719	1	*MB*	24296.141	$26268°_{3\frac{1}{2}}-50564_{2\frac{1}{2}}$	40	4126.487	2	*MB*	24226.854		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4126.522	5	*MB*	24226.649			4137.649	1400	*MB*	24161.499	$4165_{4\,1/2}-28327°_{5\,1/2}$	−21
4126.553	4	*MB*	24226.466	$8280°_{2\,1/2}-32507_{1\,1/2}$	−29	4138.101	190	*MB*	24158.860	$7454_{1\,1/2}-31613°_{0\,1/2}$	−21
4126.656	40	*MB*	24225.862	$4459°_{3\,1/2}-28685_{2\,1/2}$	−23	4138.269	8	*MB*	24157.879	$8702°_{1\,1/2}-32860_{0\,1/2}$	−29
4126.762	6	*MB*	24225.239			4138.358	150	*MB*	24157.360	$10869_{4\,1/2}-35026°_{4\,1/2}$	−42
4126.881	50	*MB*	24224.541	$7713°_{4\,1/2}-31937_{3\,1/2}$	−22	4139.027	4	*MB*	24153.455	$0°_{3\,1/2}-24153_{3\,1/2}$	−10
4126.987	40	*MB*	24223.919	$6521°_{1\,1/2}-30745_{1\,1/2}$	−34	4139.437	40	*MB*	24151.063	$10274°_{3\,1/2}-34426_{2\,1/2}$	−2
4127.105	40	*MB*	24223.226	$5942°_{3\,1/2}-30166_{3\,1/2}$	−32	4139.820	6	*MB*	24148.829	$7059°_{4\,1/2}-31207_{3\,1/2}$	−25
4127.371	700	*MB*	24221.665	$5513_{5\,1/2}-29735°_{4\,1/2}$	−38	4139.871	1	*MB*	24148.531		
4127.592	20	*MB*	24220.368	$13012°_{2\,1/2}-37232_{1\,1/2}$	26	4140.517	5	*MB*	24144.764	$8169°_{1\,1/2}-32314_{0\,1/2}$	−6
4127.750	180	*MB*	24219.441	$4511°_{2\,1/2}-28730_{3\,1/2}$	−13	4140.750	40	*MB*	24143.405	$4201°_{1\,1/2}-28345_{0\,1/2}$	−17
4127.876	5	*MB*	24218.702	$9316_{3\,1/2}-33535°_{3\,1/2}$	−21	4140.935	10	*MB*	24142.326	$8175°_{2\,1/2}-32318_{3\,1/2}$	15
4127.963	20	*MB*	24218.191	$10114°_{2\,1/2}-34333_{2\,1/2}$	−23	4141.378	2	*WA*	24139.744	$7011_{4\,1/2}-31151°_{5\,1/2}$	14
4128.060	140	*MB*	24217.622	$3593°_{4\,1/2}-27811_{3\,1/2}$	9	4141.547	1	*MB*	24138.759		
4128.358	130	*MB*	24215.874	$7522°_{5\,1/2}-31738_{5\,1/2}$	12	4141.682	2	*MB*	24137.972		
4128.483	30	*MB*	24215.141	$8774_{4\,1/2}-32989°_{3\,1/2}$	−12	4141.839	1	*MB*	24137.057		
4128.606	10	*MB*	24214.420			4141.886	1	*MB*	24136.783	$14315°_{0\,1/2}-38452_{1\,1/2}$	−34
4129.093	40	*MB*	24211.564	$9198°_{3\,1/2}-33409_{3\,1/2}$	−6	4142.039	5	*MB*	24135.892	$10798°_{2\,1/2}-34934_{2\,1/2}$	24
4129.176	60	*MB*	24211.077	$5969°_{5\,1/2}-30180_{6\,1/2}$	−11					$4201°_{1\,1/2}-28337_{2\,1/2}$	−28
4129.430	12	*MB*	24209.588			4142.397	550	*MB*	24133.806	$5616_{4\,1/2}-29750°_{5\,1/2}$	−1
4129.764	8	*MB*	24207.630	$4523°_{4\,1/2}-28730_{3\,1/2}$	−48	4142.824	110	*MB*	24131.319	$5675°_{4\,1/2}-29807_{3\,1/2}$	4
4129.773	10	*MB*	24207.577			4143.276	2	*MB*	24128.686		
4130.251	5	*MB*	24204.776			4143.457	1	*MB*	24127.632		
4130.375	5	*MB*	24204.049			4144.146	2	*MB*	24123.621		
4130.709	380	*MB*	24202.092	$4523°_{4\,1/2}-28725_{4\,1/2}$	−22	4144.365	10	*MB*	24122.346	$5942°_{3\,1/2}-30065_{3\,1/2}$	−19
4130.983	5	*MB*	24200.487			4144.494	280	*MB*	24121.595	$3854_{3\,1/2}-27975°_{4\,1/2}$	−11
4131.100	340	*MB*	24199.802	$2641°_{3\,1/2}-26841_{4\,1/2}$	−22	4144.849	10	*MB*	24119.529	$6517°_{2\,1/2}-30637_{2\,1/2}$	−8
4131.533	3	*MB*	24197.265			4144.996	480	*MB*	24118.674	$5616_{4\,1/2}-29735°_{4\,1/2}$	0
4131.858	20	*MB*	24195.362	$6549°_{2\,1/2}-30745_{1\,1/2}$	−15	4145.095	5	*MB*	24118.098		
4131.993	5	*MB*	24194.572			4145.349	1	*MB*	24116.620		
4132.155	1	*MB*	24193.623			4145.385	3	*MB*	24116.410		
4132.317	70	*MB*	24192.674	$5716°_{3\,1/2}-29908_{4\,1/2}$	−13	4145.488	5	*MB*	24115.811	$6521°_{1\,1/2}-30637_{2\,1/2}$	−13
4132.524	4	*MB*	24191.463	$7746°_{2\,1/2}-31937_{3\,1/2}$	−4	4145.858	3	*MB*			
4132.627	40	*MB*	24190.860	$6638°_{4\,1/2}-30829_{3\,1/2}$	−5	4146.234	340	*MB*	24111.472	$4523°_{4\,1/2}-28634_{5\,1/2}$	−10
4132.915	8	*MB*	24189.174			4146.487	6	*MB*	24110.001	$7259°_{3\,1/2}-31369_{2\,1/2}$	−16
4132.951	10	*MB*	24188.963			4146.698	6	*MB*	24108.775	$7061°_{0\,1/2}-31170_{1\,1/2}$	−31
										$3703°_{3\,1/2}-27812_{2\,1/2}$	−28
4133.048	12	*MB*	24188.396	$11949°_{3\,1/2}-36137_{2\,1/2}$	−18						
4133.483	2	*MB*	24185.850			4147.310	1	*MB*	24105.217	$7746°_{2\,1/2}-31851_{2\,1/2}$	5
4133.686	10	*MB*	24184.663	$4844°_{1\,1/2}-29029_{1\,1/2}$	−45	4147.510	1	*MB*	24104.055	$8131_{4\,1/2}-32235°_{3\,1/2}$	33
4133.802	1900	*MB*	24183.984	$6967_{6\,1/2}-31151°_{5\,1/2}$	−2	4147.597	1	*MB*	24103.549		
4134.550	2	*MB*	24179.609			4147.806	1	*MB*	24102.335		
4134.661	10	*MB*	24178.960	$20714_{2\,1/2}-44893°_{3\,1/2}$	−19	4148.057	1	*MB*	24100.876	$17000_{3\,1/2}-41100°_{2\,1/2}$	−48
4135.424	190	*MB*	24174.499	$4511°_{2\,1/2}-28685_{2\,1/2}$	−1	4148.165	60	*MB*	24100.249	$5964°_{3\,1/2}-30065_{3\,1/2}$	−18
4135.894	40	*MB*	24171.752	$10641°_{2\,1/2}-34813_{2\,1/2}$	−7	4148.464	1	*MB*	24098.512	$9198°_{3\,1/2}-33296_{4\,1/2}$	33
4136.751	30	*MB*	24166.744	$5283°_{0\,1/2}-29449_{1\,1/2}$	−4	4148.661	1	*MB*	24097.367	$9778°_{2\,1/2}-33876_{1\,1/2}$	−23
4136.789	40	*MB*	24166.522	$7202°_{2\,1/2}-31369_{2\,1/2}$	−41	4148.900	200	*MB*	24095.979	$8789_{2\,1/2}-32885°_{2\,1/2}$	−7
						4149.146	8	*MB*	24094.551	$8278_{5\,1/2}-32372°_{4\,1/2}$	−15
4136.895	60	*MB*	24165.903	$5969°_{5\,1/2}-30134_{5\,1/2}$	0	4149.782	300	*MB*	24090.858	$5716°_{3\,1/2}-29807_{3\,1/2}$	−3
4137.256	4	*MB*	24163.794			4149.895	400	*MB*	24090.202	$8774_{4\,1/2}-32864°_{5\,1/2}$	−11
4137.425	10	*MB*	24162.807	$23267_{3\,1/2}-47430°_{3\,1/2}$	−25					$7278°_{1\,1/2}-31369_{2\,1/2}$	31
				$11949°_{3\,1/2}-36112_{3\,1/2}$	−24	4149.971	300	*MB*	24089.761	$5819°_{4\,1/2}-29908_{4\,1/2}$	−29
4137.481	190	*MB*	24162.480	$5118°_{2\,1/2}-29281_{2\,1/2}$	−87					$3745°_{1\,1/2}-27835_{1\,1/2}$	3

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
						4161.785	6	*MB*	24021.379	$16454_{2\frac{1}{2}} - 40475°_{3\frac{1}{2}}$	9
4150.234	3	*MB*	24088.234	$9723°_{4\frac{1}{2}} - 33811_{4\frac{1}{2}}$	2	4161.938	6	*MB*	24020.496	$10274°_{3\frac{1}{2}} - 34295_{4\frac{1}{2}}$	17
4150.408	4	*MB*	24087.224	$6549°_{2\frac{1}{2}} - 30637_{2\frac{1}{2}}$	−24					$11325°_{2\frac{1}{2}} - 35346_{3\frac{1}{2}}$	−4
4150.756	2	*MB*	24085.205			4162.031	1	*MB*	24019.959	$7746°_{2\frac{1}{2}} - 31766_{1\frac{1}{2}}$	35
4150.908	300	*MB*	24084.323	$8531_{3\frac{1}{2}} - 32616°_{4\frac{1}{2}}$	−17	4162.254	3	*MB*	24018.672		
4151.149	1	*MB*	24082.925	$20554_{5\frac{1}{2}} - 44637°_{6\frac{1}{2}}$	−26	4162.287	10	*MB*	24018.482	$5010°_{2\frac{1}{2}} - 29029_{1\frac{1}{2}}$	0
4151.196	1	*MB*	24082.652	$9491°_{0\frac{1}{2}} - 33574_{1\frac{1}{2}}$	1	4162.625	110	*MB*	24016.532	$7059°_{4\frac{1}{2}} - 31075_{4\frac{1}{2}}$	1
4151.969	1000	*MB*	24078.169	$5513_{5\frac{1}{2}} - 29591°_{6\frac{1}{2}}$	5	4162.873	6	*MB*	24015.101	$4322°_{2\frac{1}{2}} - 28337_{2\frac{1}{2}}$	−4
4152.080	2	*MB*	24077.525			4162.963	2	*MB*	24014.582	$10798°_{2\frac{1}{2}} - 34813_{2\frac{1}{2}}$	−64
4152.220	1	*MB*	24076.713			4163.027	1	*MB*	24014.213	$8702°_{1\frac{1}{2}} - 32716_{2\frac{1}{2}}$	10
4152.636	2	*MB*	24074.301			4163.124	3	*MB*	24013.653		
4152.927	40	*MB*	24072.614	$13515°_{3\frac{1}{2}} - 37588_{3\frac{1}{2}}$	−5	4163.520	220	*MB*	24011.369	$11015_{3\frac{1}{2}} - 35026°_{4\frac{1}{2}}$	4
4153.130	160	*MB*	24071.438	$4266°_{3\frac{1}{2}} - 28337_{2\frac{1}{2}}$	21	4163.979	9	*MB*	24008.722	$10035°_{5\frac{1}{2}} - 34044_{4\frac{1}{2}}$	−7
				$1873°_{3\frac{1}{2}} - 25945_{3\frac{1}{2}}$	−23	4164.090	2	*MB*	24008.082	$14827_{3\frac{1}{2}} - 38835°_{2\frac{1}{2}}$	−28
4153.376	3	*MB*	24070.012			4164.763	1	*MB*	24004.203		
4153.407	4	*MB*	24069.832	$5924°_{1\frac{1}{2}} - 29994_{2\frac{1}{2}}$	−4	4164.790	2	*MB*	24004.047	$10924°_{4\frac{1}{2}} - 34928_{4\frac{1}{2}}$	−45
4153.662	1	*MB*	24068.355	$4266°_{3\frac{1}{2}} - 28334_{4\frac{1}{2}}$	−3	4165.380	1	*MB*	24000.647		
4153.872	2	*MB*	24067.138			4165.600	900	*MB*	23999.380	$7341_{5\frac{1}{2}} - 31340°_{6\frac{1}{2}}$	−5
4153.924	35	*MB*	24066.837	$13012°_{2\frac{1}{2}} - 37078_{1\frac{1}{2}}$	53	4165.850	10	*MB*	23997.940	$8804°_{4\frac{1}{2}} - 32802_{5\frac{1}{2}}$	0
4154.357	1	*MB*	24064.328	$6638°_{4\frac{1}{2}} - 30702_{4\frac{1}{2}}$	−23	4166.196	40	*MB*	23995.947	$10924°_{4\frac{1}{2}} - 34920_{3\frac{1}{2}}$	35
4154.463	2	*MB*	24063.714	$13784°_{1\frac{1}{2}} - 37848_{2\frac{1}{2}}$	−1	4166.360	2	*MB*	23995.002		
4154.654	1	*MB*	24062.608			4166.410	1	*MB*	23994.714		
4155.133	2	*MB*	24059.834	$5924°_{1\frac{1}{2}} - 29984_{1\frac{1}{2}}$	−13	4166.462	3	*MB*	23994.415		
4155.222	60	*MB*	24059.319	$7878°_{3\frac{1}{2}} - 31937_{3\frac{1}{2}}$	−5	4166.647	110	*MB*	23993.349	$4737°_{2\frac{1}{2}} - 28730_{3\frac{1}{2}}$	11
4155.269	30	*MB*	24059.047			4166.881	440	*MB*	23992.002	$10869_{4\frac{1}{2}} - 34861°_{5\frac{1}{2}}$	17
4155.358	5	*MB*	24058.532	$8804°_{4\frac{1}{2}} - 32862_{3\frac{1}{2}}$	−10	4167.580	6	*MB*	23987.978	$5819°_{4\frac{1}{2}} - 29807_{3\frac{1}{2}}$	13
4155.425	5	*MB*	24058.144	$10274°_{3\frac{1}{2}} - 34333_{2\frac{1}{2}}$	17	4167.797	180	*MB*	23986.729	$9053_{3\frac{1}{2}} - 33040°_{4\frac{1}{2}}$	5
4155.532	130	*MB*	24057.524	$9053_{3\frac{1}{2}} - 33111°_{3\frac{1}{2}}$	−9	4168.660	2	*MB*	23981.763		
4155.650	1	*MB*	24056.841			4168.969	3	*MB*	23979.986		
4155.983	4	*MB*	24054.914	$12057°_{2\frac{1}{2}} - 36112_{3\frac{1}{2}}$	0	4169.007	2	*MB*	23979.767		
4156.085	2	*MB*	24054.323			4169.694	5	*MB*	23975.817	$7259°_{3\frac{1}{2}} - 31234_{2\frac{1}{2}}$	13
4156.631	3	*MB*	24051.164	$10114°_{2\frac{1}{2}} - 34166_{1\frac{1}{2}}$	8	4169.765	230	*MB*	23975.408	$5819°_{4\frac{1}{2}} - 29794_{3\frac{1}{2}}$	4
4156.744	2	*MB*	24050.510			4169.876	230	*MB*	23974.770	$4322°_{2\frac{1}{2}} - 28297_{3\frac{1}{2}}$	5
4156.771	3	*MB*	24050.354	$12466°_{1\frac{1}{2}} - 36516_{1\frac{1}{2}}$	−13	4170.019	2	*MB*	23973.948		
4157.108	3	*MB*	24048.404			4170.170	3	*MB*	23973.080	$7878°_{3\frac{1}{2}} - 31851_{2\frac{1}{2}}$	11
4157.340	3	*MB*	24047.062	$14481°_{2\frac{1}{2}} - 38529_{2\frac{1}{2}}$	−28	4170.384	1	*MB*	23971.850	$10454°_{1\frac{1}{2}} - 34426_{2\frac{1}{2}}$	85
4157.556	7	*MB*	24045.813	$13758°_{1\frac{1}{2}} - 37804_{1\frac{1}{2}}$	49	4170.735	2	*MB*	23969.832		
4157.624	4	*MB*	24045.419	$7522°_{5\frac{1}{2}} - 31568_{4\frac{1}{2}}$	22	4170.853	2	*MB*	23969.154	$10798°_{2\frac{1}{2}} - 34767_{1\frac{1}{2}}$	19
4158.715	1	*MB*	24039.112			4171.033	9	*MB*	23968.120	$7202°_{2\frac{1}{2}} - 31170_{1\frac{1}{2}}$	4
4159.028	320	*MB*	24037.302	$8789_{2\frac{1}{2}} - 32826°_{1\frac{1}{2}}$	14	4171.151	1	*MB*	23967.442		
4159.621	2	*MB*	24033.876			4171.381	40	*MB*	23966.120	$5942°_{3\frac{1}{2}} - 29908_{4\frac{1}{2}}$	15
4159.728	4	*MB*	24033.258	$7818°_{1\frac{1}{2}} - 31851_{2\frac{1}{2}}$	8	4171.726	1	*MB*	23964.138		
4159.885	3	*MB*	24032.350	$7202°_{2\frac{1}{2}} - 31234_{2\frac{1}{2}}$	0	4171.950	4	*MB*	23962.852	$8175°_{2\frac{1}{2}} - 32138_{2\frac{1}{2}}$	17
4159.983	3	*MB*	24031.784	$19136°_{2\frac{1}{2}} - 43167_{1\frac{1}{2}}$	−71	4172.152	80	*MB*	23961.692	$2879°_{5\frac{1}{2}} - 26841_{4\frac{1}{2}}$	3
4160.107	50	*MB*	24031.068	$4266°_{3\frac{1}{2}} - 28297_{3\frac{1}{2}}$	−7	4172.486	5	*MB*	23959.773		
4160.176	50	*MB*	24030.669	$7059°_{4\frac{1}{2}} - 31089_{5\frac{1}{2}}$	11	4172.700	2	*MB*	23958.545	$11387°_{3\frac{1}{2}} - 35346_{3\frac{1}{2}}$	−5
4160.404	3	*MB*	24029.352	$19138°_{1\frac{1}{2}} - 43167_{1\frac{1}{2}}$	7	4172.885	4	*WA*	23957.482	$5716°_{3\frac{1}{2}} - 29673_{2\frac{1}{2}}$	−71
				$9778°_{2\frac{1}{2}} - 33808_{2\frac{1}{2}}$	22	4173.147	2	*MB*	23955.979	$7278°_{1\frac{1}{2}} - 31234_{2\frac{1}{2}}$	22
4160.437	2	*MB*	24029.162	$5964°_{3\frac{1}{2}} - 29994_{2\frac{1}{2}}$	17	4173.419	1	*MB*	23954.417		
4161.164	80	*MB*	24024.964	$7722_{2\frac{1}{2}} - 31747°_{1\frac{1}{2}}$	6	4173.491	2	*MB*	23954.004	$14315°_{0\frac{1}{2}} - 38269_{0\frac{1}{2}}$	−37

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4173.949	6	*MB*	23951.376	$1410°_{4\,1/2}-25361_{4\,1/2}$	6	4186.857	4	*MB*	23877.535	$12260°_{3\,1/2}-36137_{2\,1/2}$	20
4174.134	5	*MB*	23950.314	$9198°_{3\,1/2}-33148_{2\,1/2}$	51	4187.221	5	*MB*	23875.460	$6549°_{2\,1/2}-30425_{2\,1/2}$	19
4174.223	1	*MB*	23949.803			4187.321	380	*MB*	23874.890	$4459°_{3\,1/2}-28334_{4\,1/2}$	6
4174.331	2	*MB*	23949.184			4187.465	5	*MB*	23874.069		
4174.389	9	*MB*	23948.851	$7259°_{3\,1/2}-31207_{3\,1/2}$	0	4187.570	4	*MB*	23873.470		
4174.470	80	*MB*	23948.387	$4737°_{2\,1/2}-28685_{2\,1/2}$	2	4188.300	1	*MB*	23869.309		
4174.537	5	*MB*	23948.002	$7818°_{1\,1/2}-31766_{1\,1/2}$	40	4188.435	6	*MB*	23868.540	$12057°_{2\,1/2}-35925_{3\,1/2}$	−34
4174.873	1	*MB*	23946.075			4188.661	4	*WA*	23867.252	$13784°_{1\,1/2}-37652_{2\,1/2}$	−4
4175.231	50	*MB*	23944.021	$5964°_{3\,1/2}-29908_{4\,1/2}$	14	4188.866	1	*MB*	23866.084	$5924°_{1\,1/2}-29790_{0\,1/2}$	18
4175.789	2	*MB*	23940.822			4189.181	35	*MB*	23864.289	$5942°_{3\,1/2}-29807_{3\,1/2}$	10
4175.852	2	*MB*	23940.461			4189.250	2	*MB*	23863.896		
4175.944	9	*MB*	23939.934	$9634°_{1\,1/2}-33574_{1\,1/2}$	−24	4189.527	3	*MB*	23862.319	$10114°_{2\,1/2}-33977_{3\,1/2}$	62
				$5969°_{5\,1/2}-29908_{4\,1/2}$	37	4189.637	40	*MB*	23861.692	$7293°_{6\,1/2}-31155_{6\,1/2}$	7
4176.077	90	*MB*	23939.171	$3995°_{3\,1/2}-27934_{4\,1/2}$	−6	4190.294	3	*MB*	23857.951		
4176.384	1	*MB*	23937.411			4190.327	4	*MB*	23857.763	$8280°_{2\,1/2}-32138_{2\,1/2}$	11
4176.518	3	*MB*	23936.643	$9723°_{4\,1/2}-33659_{5\,1/2}$	10	4190.613	100	*MB*	23856.135		
4176.701	240	*MB*	23935.595	$9053_{3\,1/2}-32989°_{3\,1/2}$	6	4190.620	20	*MB*	23856.095	$7233°_{5\,1/2}-31089_{5\,1/2}$	−8
4176.952	1	*MB*	23934.156			4190.833	4	*MB*	23854.882	$7713°_{4\,1/2}-31568_{4\,1/2}$	−47
4177.057	6	*MB*	23933.554			4191.028	40	*MB*	23853.772	$20783_{5\,1/2}-44637°_{6\,1/2}$	17
4177.322	2	*MB*	23932.036			4191.347	9	*MB*	23851.957	$12260°_{3\,1/2}-36112_{3\,1/2}$	24
4177.559	2	*MB*	23930.678			4191.491	1	*MB*	23851.138		
4177.827	3	*MB*	23929.144	$13659°_{4\,1/2}-37588_{3\,1/2}$	0	4191.521	1	*MB*	23850.967		
4178.143	5	*MB*	23927.334	$5437°_{3\,1/2}-29364_{3\,1/2}$	16	4192.216	5	*MB*	23847.013		
4178.254	2	*MB*	23926.698	$11007°_{1\,1/2}-34934_{2\,1/2}$	75	4192.244	1	*MB*	23846.853	$9198°_{3\,1/2}-33045_{2\,1/2}$	85
4179.074	10	*MB*	23922.004	$7233°_{5\,1/2}-31155_{6\,1/2}$	8	4192.411	2	*MB*	23845.904		
4179.143	1	*MB*	23921.608			4192.473	4	*MB*	23845.551	$7713°_{4\,1/2}-31558_{3\,1/2}$	14
4179.286	50	*MB*	23920.790	$3593°_{4\,1/2}-27514_{3\,1/2}$	12	4192.523	2	*MB*	23845.267	$2634°_{2\,1/2}-26479_{1\,1/2}$	7
4180.210	3	*MB*	23915.502	$8402°_{3\,1/2}-32318_{3\,1/2}$	−4	4192.755	15	*MB*	23843.947	$5437°_{3\,1/2}-29281_{2\,1/2}$	−4
4180.813	3	*MB*	23912.053	$17171°_{5\,1/2}-41083_{4\,1/2}$	5	4193.060	140	*MB*	23842.213	$5964°_{3\,1/2}-29807_{3\,1/2}$	31
4181.077	240	*MB*	23910.544	$5118°_{2\,1/2}-29029_{1\,1/2}$	−2	4193.102	260	*MB*	23841.974	$8774_{4\,1/2}-32616°_{4\,1/2}$	19
										$7233°_{5\,1/2}-31075_{4\,1/2}$	−1
4181.217	3	*MB*	23909.743	$3995°_{3\,1/2}-27905_{4\,1/2}$	46						
4181.483	7	*MB*	23908.222			4193.280	260	*MB*	23840.962	$8531_{3\,1/2}-32372°_{4\,1/2}$	19
4181.565	2	*MB*	23907.753	$6517°_{2\,1/2}-30425_{2\,1/2}$	23	4193.870	260	*MB*	23837.608	$4459°_{3\,1/2}-28297_{3\,1/2}$	7
4181.633	1	*MB*	23907.364	$9269°_{0\,1/2}-33177_{0\,1/2}$	−5	4194.733	2	*MB*	23832.704		
4181.940	1	*MB*	23905.609			4194.815	4	*MB*	23832.238	$13012°_{2\,1/2}-36844_{2\,1/2}$	28
4182.215	8	*MB*	23904.038	$6521°_{1\,1/2}-30425_{2\,1/2}$	21	4194.904	130	*MB*	23831.732	$9053_{3\,1/2}-32885°_{2\,1/2}$	−5
4182.504	1	*MB*	23902.386							$987°_{4\,1/2}-24819_{3\,1/2}$	10
4182.672	5	*MB*	23901.426			4195.272	7	*MB*	23829.642	$5964°_{3\,1/2}-29794_{3\,1/2}$	21
4182.940	2	*MB*	23899.894	$11325°_{2\,1/2}-35225_{2\,1/2}$	20	4195.685	1	*MB*	23827.296		
4182.972	2	*MB*	23899.712	$7061°_{0\,1/2}-30961_{1\,1/2}$	32	4195.700	4	*MB*	23827.211		
4183.391	1	*MB*	23897.318			4195.814	50	*MB*	23826.564	$4511°_{2\,1/2}-28337_{2\,1/2}$	7
4184.367	3	*MB*	23891.744	$7278°_{1\,1/2}-31170_{1\,1/2}$	21	4196.115	1	*MB*	23824.855		
4184.458	2	*MB*	23891.224			4196.330	450	*MB*	23823.634	$3363°_{2\,1/2}-27187_{3\,1/2}$	14
4184.875	2	*MB*	23888.844			4196.575	5	*MB*	23822.243	$12466°_{1\,1/2}-36288_{0\,1/2}$	14
4185.331	240	*MB*	23886.241	$3363°_{2\,1/2}-27249_{2\,1/2}$	0	4197.131	1	*MB*	23819.088		
4185.816	1	*MB*	23883.474			4197.240	2	*MB*	23818.469		
4185.878	1	*MB*	23883.120			4197.507	100	*MB*	23816.954	$3995°_{3\,1/2}-27812_{2\,1/2}$	16
4186.133	2	*MB*	23881.665	$13012°_{2\,1/2}-36893_{3\,1/2}$	−9	4197.578	10	*MB*	23816.551	$7259°_{3\,1/2}-31075_{4\,1/2}$	23
4186.365	4	*MB*	23880.342	$10274°_{3\,1/2}-34155_{3\,1/2}$	2	4197.666	130	*MB*	23816.052	$3995°_{3\,1/2}-27811_{3\,1/2}$	16
4186.596	2500	*MB*	23879.024	$6967_{6\,1/2}-30846°_{7\,1/2}$	−10	4197.869	5	*MB*	23814.900	$17475°_{4\,1/2}-41289_{5\,1/2}$	−47

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4197.993	200b	*MB*	23814.197	$4910°_{5\,1/2}-28725_{4\,1/2}$	12	4211.825	7	*MB*	23735.990	$8402°_{3\,1/2}-32138_{2\,1/2}$	−39
4198.298	3	*MB*	23812.467	$7746°_{2\,1/2}-31558_{3\,1/2}$	26	4211.907	2	*MB*	23735.528		
4198.427	130	*MB*	23811.735	$4523°_{4\,1/2}-28334_{4\,1/2}$	12	4211.966	2	*MB*	23735.196		
4198.643	200	*MB*	23810.510	$7341_{5\,1/2}-31151°_{5\,1/2}$	−16	4212.056	5	*MB*	23734.689		
4198.715	600	*MB*	23810.102	$4165_{4\,1/2}-27975°_{4\,1/2}$	33	4212.167	2	*MB*	23734.063		
4199.520	4	*MB*	23805.538			4212.620	2	*MB*	23731.511	$28327°_{5\,1/2}-52058_{4\,1/2}$	−4
4199.546	3	*WA*	23805.390	$11007°_{1\,1/2}-34813_{2\,1/2}$	−12	4212.644	5	*MB*	23731.376		
4199.582	1	*MB*	23805.186			4212.720	12	*MB*	23730.948	$5942°_{3\,1/2}-29673_{2\,1/2}$	−23
4200.360	1	*MB*	23800.777			4212.933	2	*MB*	23729.748		
4200.711	1	*MB*	23798.788			4213.039	70	*MB*	23729.151	$5437°_{3\,1/2}-29166_{4\,1/2}$	−23
4200.794	1	*MB*	23798.318			4213.198	20	*MB*	23728.255		
4201.055	1	*MB*	23796.840			4213.690	2	*MB*	23725.485		
4201.117	1	*MB*	23796.489			4214.038	260	*MB*	23723.525	$4910°_{5\,1/2}-28634_{5\,1/2}$	−27
4201.235	170	*MB*	23795.820	$7293°_{6\,1/2}-31089_{5\,1/2}$	28	4214.701	25	*MB*	23719.794	$5010°_{2\,1/2}-28730_{3\,1/2}$	−47
4201.320	70	*MB*	23795.339	$8402°_{3\,1/2}-32197_{4\,1/2}$	25	4215.419	20	*MB*	23715.754		
4201.596	2	*MB*	23793.776			4215.543	2	*MB*	23715.056		
4201.700	2	*MB*	23793.187			4215.612	20	*MB*	23714.668		
4202.090	1	*MB*	23790.979			4215.798	20	*MB*	23713.622		
4202.657	1	*MB*	23787.769	$10088°_{1\,1/2}-33876_{1\,1/2}$	32	4216.051	2	*MB*	23712.199	$16159°_{3\,1/2}-39871_{4\,1/2}$	−97
4202.709	4	*MB*	23787.475	$5651°_{5\,1/2}-29438_{5\,1/2}$	15	4216.511	2	*MB*	23709.612		
4202.926	325	*MB*	23786.247	$4511°_{2\,1/2}-28297_{3\,1/2}$	31	4216.630	7	*MB*	23708.943	$28349°_{3\,1/2}-52058_{4\,1/2}$	−61
4202.956	325	*MB*	23786.077	$3593°_{4\,1/2}-27379_{5\,1/2}$	10					$5964°_{3\,1/2}-29673_{2\,1/2}$	69
4203.164	2	*MB*	23784.900	$17300°_{3\,1/2}-41085_{3\,1/2}$	−3	4216.835	15	*MB*	23707.790		
4203.502	40	*MB*	23782.987	$17300°_{3\,1/2}-41083_{4\,1/2}$	3	4217.226	20	*MB*	23705.592	$10454°_{1\,1/2}-34159_{0\,1/2}$	−12
				$0°_{3\,1/2}-23782_{2\,1/2}$	−3	4217.590	220	*MB*	23703.547	$8531_{3\,1/2}-32235°_{3\,1/2}$	−13
4203.554	2	*MB*	23782.693			4217.836	20	*MB*	23702.164	$10274°_{3\,1/2}-33977_{3\,1/2}$	−4
4203.797	1	*MB*	23781.318			4218.321	5	*MB*	23699.439		
4203.933	2	*MB*	23780.549	$9269°_{0\,1/2}-33050_{1\,1/2}$	84	4218.473	5	*MB*	23698.585		
4204.716	25	*MB*	23776.120	$6389°_{4\,1/2}-30166_{3\,1/2}$	6	4218.833	10	*MB*	23696.563	$19946°_{1\,1/2}-43643_{0\,1/2}$	−98
4204.758	25	*MB*	23775.883	$10035°_{5\,1/2}-33811_{4\,1/2}$	27	4219.085	10	*MB*	23695.147		
4205.015	2	*MB*	23774.430	$4523°_{4\,1/2}-28297_{3\,1/2}$	−9	4219.214	5	*MB*	23694.423		
4205.157	40	*MB*	23773.627	$9778°_{2\,1/2}-33552_{2\,1/2}$	31	4219.260	5	*MB*	23694.165		
4205.450	1	*MB*	23771.971	$13758°_{1\,1/2}-37530_{1\,1/2}$	8	4219.392	25	*MB*	23693.424	$10114°_{2\,1/2}-33808_{2\,1/2}$	−9
4205.787	25	*MB*	23770.066	$7059°_{4\,1/2}-30829_{3\,1/2}$	14	4219.707	30	*MB*	23691.655	$10641°_{2\,1/2}-34333_{2\,1/2}$	0
4205.887	25	*MB*	23769.501	$10274°_{3\,1/2}-34044_{4\,1/2}$	31	4220.063	15	*MB*	23689.656	$7878°_{3\,1/2}-31568_{4\,1/2}$	−34
4206.825	6	*MB*	23764.201	$7278°_{1\,1/2}-31043_{2\,1/2}$	13	4220.189	20	*MB*	23688.949	$5675°_{4\,1/2}-29364_{3\,1/2}$	−27
4206.981	1	*MB*	23763.320			4220.406	2	*MB*	23687.731	$8804°_{4\,1/2}-32492_{5\,1/2}$	−82
4207.025	2	*MB*	23763.071	$5675°_{4\,1/2}-29438_{5\,1/2}$	17	4220.551	25	*MB*	23686.917	$17171°_{5\,1/2}-40858_{4\,1/2}$	−42
4207.590	1	*MB*	23759.881	$11007°_{1\,1/2}-34767_{1\,1/2}$	−10	4220.610	10	*MB*	23686.586	$9723°_{4\,1/2}-33409_{3\,1/2}$	24
4208.234	4	*MB*	23756.244	$20881_{6\,1/2}-44637°_{6\,1/2}$	32	4220.770	25	*MB*	23685.688	$9491°_{0\,1/2}-33177_{0\,1/2}$	−14
4208.234	4	*MB*	23756.244	$2595°_{1\,1/2}-26351_{0\,1/2}$	−22	4220.833	7	*MB*	23685.334		
4208.431	6	*MB*	23755.133			4221.173	40	*MB*	23683.427	$7061°_{0\,1/2}-30745_{1\,1/2}$	−20
4208.680	4	*MB*	23753.727	$7278°_{1\,1/2}-31032_{0\,1/2}$	38	4221.205	12	*MB*	23683.247		
4209.037	5	*MB*	23751.712			4221.324	17	*MB*	23682.580	$7278°_{1\,1/2}-30961_{1\,1/2}$	−15
4209.408	190	*MB*	23749.619	$5513_{5\,1/2}-29263°_{5\,1/2}$	−9	4221.383	15	*MB*	23682.249		
4209.991	50	*MB*	23746.330	$5283°_{0\,1/2}-29029_{1\,1/2}$	7	4221.452	10	*MB*	23681.862		
4210.085	10	*MB*	23745.800	$13784°_{1\,1/2}-37530_{1\,1/2}$	1	4221.484	20	*MB*	23681.682	$8169°_{1\,1/2}-31851_{2\,1/2}$	−16
4210.235	35	*MB*	23744.954	$6389°_{4\,1/2}-30134_{5\,1/2}$	−13	4221.730	12	*MB*	23680.302	$13515°_{3\,1/2}-37196_{4\,1/2}$	17
4210.291	7	*MB*	23744.638							$7878°_{3\,1/2}-31558_{3\,1/2}$	5
4211.585	30	*MB*	23737.343	$17851°_{0\,1/2}-41589_{0\,1/2}$	8	4222.362	7	*MB*	23676.758		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
4222.598	1100	*MB*	23675.434	$987°_{4\,1/2}-24663_{4\,1/2}$	−9	4236.744	12	*MB*	23596.386	$8169°_{1\,1/2}-31766_{1\,1/2}$	−24
4223.158	20	*MB*	23672.295	$9316_{3\,1/2}-32989°_{3\,1/2}$	−10	4236.903	7	*MB*	23595.501		
4223.256	5	*MB*	23671.746			4236.994	7	*MB*	23594.994	$11325°_{2\,1/2}-34920_{3\,1/2}$	−12
4223.361	5	*MB*	23671.157	$12466°_{1\,1/2}-36137_{2\,1/2}$	−16	4237.065	5	*MB*	23594.599		
4223.587	5	*MB*	23669.891			4237.203	25	*MB*	23593.830	$11340°_{3\,1/2}-34934_{2\,1/2}$	6
4223.752	30	*MB*	23668.966			4237.326	5	*MB*	23593.146	$3593°_{4\,1/2}-27187_{3\,1/2}$	−18
4223.885	80	*MB*	23668.221	$4266°_{3\,1/2}-27934_{4\,1/2}$	−19	4237.649	2	*MB*	23591.347		
4224.359	7	*MB*	23665.565	$12260°_{3\,1/2}-35925_{3\,1/2}$	−28	4237.704	2	*MB*	23591.041		
4224.557	30	*MB*	23664.456	$9198°_{3\,1/2}-32862_{3\,1/2}$	15	4237.796	25	*MB*	23590.529	$9269°_{0\,1/2}-32860_{0\,1/2}$	2
4224.643	2	*MB*	23663.974			4237.851	12	*MB*	23590.223	$8175°_{2\,1/2}-31766_{1\,1/2}$	−22
4224.686	2	*MB*	23663.734			4238.176	17	*MB*	23588.414	$11340°_{3\,1/2}-34928_{4\,1/2}$	43
4224.759	5	*MB*	23663.325			4238.353	5	*MB*	23587.429		
4225.189	10	*MB*	23660.917			4238.443	5	*MB*	23586.928		
4225.726	25	*MB*	23657.910	$7011_{4\,1/2}-30669°_{4\,1/2}$	12	4238.557	25	*MB*	23586.293	$3793°_{6\,1/2}-27379_{5\,1/2}$	−21
4225.894	10	*MB*	23656.969			4239.035	25	*MB*	23583.634	$13758°_{1\,1/2}-37342_{2\,1/2}$	−22
4226.554	2	*MB*	23653.275			4239.109	5	*MB*	23583.222		
4227.415	70	*MB*	23648.458	$6517°_{2\,1/2}-30166_{3\,1/2}$	20	4239.630	12	*MB*	23580.324		
4227.457	7	*MB*	23648.223	$7522°_{0\,1/2}-31170_{1\,1/2}$	36	4239.652	30	*MB*	23580.202	$11340°_{3\,1/2}-34920_{3\,1/2}$	12
4227.747	550	*MB*	23646.601	$5616_{4\,1/2}-29263°_{5\,1/2}$	2	4239.717	5	*MB*	23579.840		
4228.296	60	*MB*	23643.530	$7059°_{4\,1/2}-30702_{4\,1/2}$	−7	4239.909	700	*MB*	23578.773	$3854_{3\,1/2}-27432°_{4\,1/2}$	3
4228.831	25	*MB*	23640.539	$0°_{3\,1/2}-23640_{4\,1/2}$	−23	4240.157	12	*MB*	23577.394	$7092_{5\,1/2}-30669°_{4\,1/2}$	−42
4229.160	15	*MB*	23638.700	$4266°_{3\,1/2}-27905_{4\,1/2}$	−59	4240.793	15	*MB*	23573.858		
4229.637	25	*MB*	23636.034			4240.866	15	*MB*	23573.452	$9723°_{4\,1/2}-33296_{4\,1/2}$	−17
4230.126	60	*MB*	23633.302	$4201°_{1\,1/2}-27835_{1\,1/2}$	−37	4241.404	35	*MB*	23570.462	$8280°_{2\,1/2}-31851_{2\,1/2}$	11
4230.184	20	*MB*	23632.978	$7522°_{5\,1/2}-31155_{6\,1/2}$	−23	4241.651	17	*MB*	23569.089	$7454_{1\,1/2}-31024°_{2\,1/2}$	−35
4230.555	30	*MB*	23630.906	$9778°_{2\,1/2}-33409_{3\,1/2}$	−4	4241.746	30	*MB*	23568.562	$11458_{5\,1/2}-35026°_{4\,1/2}$	−28
4230.961	2	*MB*	23628.638			4241.859	2	*MB*	23567.933		
4231.016	2	*MB*	23628.331			4242.013	60	*MB*	23567.078	$7522°_{5\,1/2}-31089_{5\,1/2}$	−31
4231.171	20	*MB*	23627.465	$10798°_{2\,1/2}-34426_{2\,1/2}$	−16	4242.363	20	*MB*	23565.134	$5716°_{3\,1/2}-29281_{2\,1/2}$	−23
4231.334	17	*MB*	23626.555	$7202°_{2\,1/2}-30829_{3\,1/2}$	−39	4242.721	280	*MB*	23563.145	$2382°_{4\,1/2}-25945_{3\,1/2}$	−4
4231.744	280	*MB*	23624.266	$10035°_{5\,1/2}-33659_{5\,1/2}$	9	4242.863	30	*MB*	23562.357	$9053_{3\,1/2}-32616°_{4\,1/2}$	−32
4231.996	12	*MB*	23622.860	$7746°_{2\,1/2}-31369_{2\,1/2}$	−47	4243.284	12	*MB*	23560.019	$3793°_{6\,1/2}-27353_{7\,1/2}$	−16
4232.055	70	*MB*	23622.530	$7722_{2\,1/2}-31344°_{3\,1/2}$	−12	4243.312	17	*MB*	23559.863	$12365°_{4\,1/2}-35925_{3\,1/2}$	−12
4232.387	2	*MB*	23620.677			4243.743	60b	*MB*	23557.471	$13784°_{1\,1/2}-37342_{2\,1/2}$	−21
4232.562	100	*MB*	23619.700	$5819°_{4\,1/2}-29438_{5\,1/2}$	−3	4244.055	2	*MB*	23555.739		
4233.197	60	*MB*	23616.157	$6549°_{2\,1/2}-30166_{3\,1/2}$	9	4244.557	25	*MB*	23552.953	$7522°_{5\,1/2}-31075_{4\,1/2}$	−28
4233.273	5	*MB*	23615.733			4244.919	25	*MB*	23550.945	$7818°_{1\,1/2}-31369_{2\,1/2}$	0
4233.960	30	*MB*	23611.902	$5118°_{2\,1/2}-28730_{3\,1/2}$	−3	4244.999	5	*MB*	23550.501		
4234.211	170	*MB*	23610.502	$4201°_{1\,1/2}-27812_{2\,1/2}$	−2	4245.069	5	*MB*	23550.113		
4234.393	15	*MB*	23609.487	$11949°_{3\,1/2}-35558_{3\,1/2}$	−25	4245.537	25	*MB*	23547.517	$12260°_{3\,1/2}-35807_{4\,1/2}$	37
										$6517°_{2\,1/2}-30065_{3\,1/2}$	−27
4234.547	15	*MB*	23608.629	$11325°_{2\,1/2}-34934_{2\,1/2}$	−12						
4234.729	60	*MB*	23607.614	$6638°_{4\,1/2}-30245_{4\,1/2}$	−5	4245.812	30	*MB*	23545.991	$4266°_{3\,1/2}-27812_{2\,1/2}$	−9
4235.099	5	*MB*	23605.552			4245.877	220	*MB*	23545.631	$5819°_{4\,1/2}-29364_{3\,1/2}$	4
4235.151	5	*MB*	23605.262			4245.967	220	*MB*	23545.132	$4266°_{3\,1/2}-27811_{3\,1/2}$	33
4235.228	2	*MB*	23604.833			4246.359	25	*MB*	23542.958	$9634°_{1\,1/2}-33177_{0\,1/2}$	−51
4235.625	2	*MB*	23602.620			4246.393	60	*MB*	23542.770	$7202°_{2\,1/2}-30745_{1\,1/2}$	13
4235.881	10	*MB*	23601.194	$18147°_{2\,1/2}-41748_{1\,1/2}$	−79	4246.712	280	*MB*	23541.002	$2140°_{0\,1/2}-25681_{1\,1/2}$	6
4236.018	140	*MB*	23600.430	$4737°_{2\,1/2}-28337_{2\,1/2}$	−10	4246.935	25	*MB*	23539.765	$19920°_{3\,1/2}-43460_{2\,1/2}$	46
4236.140	10	*MB*	23599.751			4246.994	2	*MB*	23539.438		
4236.356	60	*MB*	23598.547	$8774_{4\,1/2}-32372°_{4\,1/2}$	−9	4247.381	2	*MB*	23537.294		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
4247.445	50	*MB*	23536.939	$3363°_{2\,1/2}-26900_{3\,1/2}$	12	4257.124	80	*MB*	23483.426	$3703°_{3\,1/2}-27187_{3\,1/2}$	−26
4247.601	10	*MB*	23536.074			4257.462	15	*MB*	23481.562	$10684°_{0\,1/2}-34166_{1\,1/2}$	−35
4247.795	25	*MB*	23535.000	$8402°_{3\,1/2}-31937_{3\,1/2}$	15	4257.983	12	*MB*	23478.689		
4248.088	50	*MB*	23533.376	$10274°_{3\,1/2}-33808_{2\,1/2}$	31	4258.391	40	*MB*	23476.439	$6517°_{2\,1/2}-29994_{2\,1/2}$	18
4248.668	750	*MB*	23530.164	$5513_{5\,1/2}-29043°_{6\,1/2}$	19	4258.483	7	*MB*	23475.932	$17000_{3\,1/2}-40475°_{3\,1/2}$	15
4248.986	7	*MB*	23528.403	$12097_{3\,1/2}-35625°_{3\,1/2}$	−20	4258.696	30	*MB*	23474.758	$4459°_{3\,1/2}-27934_{4\,1/2}$	−7
4249.008	30	*MB*	23528.281	$8402°_{3\,1/2}-31930_{4\,1/2}$	13	4258.879	25	*MB*	23473.750	$13758°_{1\,1/2}-37232_{1\,1/2}$	−17
4249.104	20	*MB*	23527.749	$6638°_{4\,1/2}-30166_{3\,1/2}$	−49	4259.063	20	*MB*	23472.735	$6521°_{1\,1/2}-29994_{2\,1/2}$	27
4249.389	25	*MB*	23526.172			4259.305	7	*MB*	23471.402		
4249.500	15	*MB*	23525.557	$5924°_{1\,1/2}-29449_{1\,1/2}$	−16	4259.600	20	*MB*	23469.776	$5969°_{5\,1/2}-29438_{5\,1/2}$	−33
4249.553	15	*MB*	23525.264			4259.744	90	*MB*	23468.983	$7233°_{5\,1/2}-30702_{4\,1/2}$	0
4249.669	20	*MB*	23524.621	$10641°_{2\,1/2}-34166_{1\,1/2}$	25	4260.212	25	*MB*	23466.405	$7278°_{1\,1/2}-30745_{1\,1/2}$	41
4249.964	15	*MB*	23522.989							$6517°_{2\,1/2}-29984_{1\,1/2}$	−27
4250.258	2	*MB*	23521.361			4260.599	2	*MB*	23464.273		
4250.642	15	*MB*	23519.237	$3995°_{3\,1/2}-27514_{3\,1/2}$	37	4260.663	7	*MB*	23463.921	$10088°_{1\,1/2}-33552_{2\,1/2}$	−20
4250.690	10	*MB*	23518.971	$6389°_{4\,1/2}-29908_{4\,1/2}$	9	4260.889	5	*MB*	23462.676	$6521°_{1\,1/2}-29984_{1\,1/2}$	−43
4250.817	30	*MB*	23518.268	$9198°_{3\,1/2}-32716_{2\,1/2}$	−52	4261.064	17	*MB*	23461.713	$7746°_{2\,1/2}-31207_{3\,1/2}$	−28
4250.842	15	*MB*	23518.130	$8448_{2\,1/2}-31966°_{2\,1/2}$	23	4261.162	80	*MB*	23461.173	$8774_{4\,1/2}-32235°_{3\,1/2}$	−1
4250.987	2	*MB*	23517.328			4261.513	7	*MB*	23459.241	$10114°_{2\,1/2}-33574_{1\,1/2}$	−20
4251.236	2	*MB*	23515.950			4261.857	2	*MB*	23457.347		
4251.363	25	*MB*	23515.248	$6549°_{2\,1/2}-30065_{3\,1/2}$	−7	4262.060	2	*MB*	23456.230		
				$5651°_{5\,1/2}-29166_{4\,1/2}$	8	4262.097	7	*MB*	23456.027		
4251.599	40	*MB*	23513.943	$19946°_{1\,1/2}-43460_{2\,1/2}$	−21	4262.374	15	*MB*	23454.502	$3363°_{2\,1/2}-26817_{2\,1/2}$	−6
				$8804°_{4\,1/2}-32318_{3\,1/2}$	−7	4262.558	5	*MB*	23453.490		
4251.857	40	*MB*	23512.516	$4322°_{2\,1/2}-27835_{1\,1/2}$	−8	4263.065	15	*MB*	23450.700	$12751°_{5\,1/2}-36202_{4\,1/2}$	−74
4252.125	10	*MB*	23511.034			4263.138	17	*MB*	23450.299	$5716°_{3\,1/2}-29166_{4\,1/2}$	−81
4252.292	7	*MB*	23510.111	$7522°_{0\,1/2}-31032_{0\,1/2}$	−41	4263.424	140	*MB*	23448.726	$8402°_{3\,1/2}-31851_{2\,1/2}$	−2
4252.388	12	*MB*	23509.580			4263.631	15	*MB*	23447.588	$13784°_{1\,1/2}-37232_{1\,1/2}$	−15
4252.736	5	*MB*	23507.656			4263.949	50	*MB*	23445.839	$8789_{2\,1/2}-32235°_{3\,1/2}$	−19
4252.928	2	*MB*	23506.595			4264.057	25	*MB*	23445.245	$4459°_{3\,1/2}-27905_{4\,1/2}$	−39
4253.022	5	*MB*	23506.076			4264.369	120	*MB*	23443.530	$7259°_{3\,1/2}-30702_{4\,1/2}$	−4
4253.367	280	*MB*	23504.169	$3745°_{1\,1/2}-27249_{2\,1/2}$	−24	4264.494	5	*MB*	23442.842		
4253.426	10	*MB*	23503.843			4264.666	10	*MB*	23441.897	$11325°_{2\,1/2}-34767_{1\,1/2}$	−12
4253.703	15	*MB*	23502.312	$17171°_{5\,1/2}-40673_{5\,1/2}$	−17	4264.692	20	*MB*	23441.754	$12365°_{4\,1/2}-35807_{4\,1/2}$	−7
4253.837	20	*MB*	23501.572	$12057°_{2\,1/2}-35558_{3\,1/2}$	−22	4264.773	2	*MB*	23441.309		
4254.000	17	*MB*	23500.671	$4844°_{1\,1/2}-28345_{0\,1/2}$	0	4264.830	5	*MB*	23440.995		
4254.255	7	*MB*	23499.263			4265.028	7	*MB*	23439.907	$12762°_{4\,1/2}-36202_{4\,1/2}$	−8
4254.735	50b	*MB*	23496.612	$6638°_{4\,1/2}-30134_{5\,1/2}$	−39	4265.186	2	*MT*	23439.039	$7522°_{0\,1/2}-30961_{1\,1/2}$	−20
4254.907	35	*MB*	23495.662	$10035°_{5\,1/2}-33531_{6\,1/2}$	−14	4265.264	5	*MB*	23438.611		
4255.055	17	*MB*	23494.845	$7713°_{4\,1/2}-31207_{3\,1/2}$	7	4265.545	5	*MB*	23437.066		
4255.358	35	*MB*	23493.172	$4844°_{1\,1/2}-28337_{2\,1/2}$	2	4265.697	25	*MB*	23436.231	$8702°_{1\,1/2}-32138_{2\,1/2}$	−22
4255.612	10	*MB*	23491.770	$14481°_{2\,1/2}-37973_{3\,1/2}$	−70	4265.913	25	*MB*	23435.045	$8531_{3\,1/2}-31966°_{2\,1/2}$	−24
4255.684	15	*MB*	23491.372			4266.078	20	*MB*	23434.138	$6549°_{2\,1/2}-29984_{1\,1/2}$	−5
4255.779	440	*MB*	23490.848	$5675°_{4\,1/2}-29166_{4\,1/2}$	14	4266.333	20	*MB*	23432.738		
4255.991	50	*MB*	23489.678	$4322°_{2\,1/2}-27812_{2\,1/2}$	−11	4266.536	2	*MB*	23431.623		
4256.151	120	*MB*	23488.795	$4322°_{2\,1/2}-27811_{3\,1/2}$	7	4266.685	7	*MB*	23430.804		
4256.352	20	*MB*	23487.686	$1873°_{3\,1/2}-25361_{4\,1/2}$	−53	4267.219	70	*MB*	23427.872	$4523°_{4\,1/2}-27950_{5\,1/2}$	15
4256.404	15	*MB*	23487.399	$11325°_{2\,1/2}-34813_{2\,1/2}$	−21	4267.402	20	*MB*	23426.868	$6638°_{4\,1/2}-30065_{3\,1/2}$	−37
4256.710	15	*MB*	23485.710	$1873°_{3\,1/2}-25359_{2\,1/2}$	−41	4267.665	15	*MB*	23425.424	$11387°_{3\,1/2}-34813_{2\,1/2}$	−46
4256.880	7	*MB*	23484.772			4267.846	25	*MB*	23424.431	$7746°_{2\,1/2}-31170_{1\,1/2}$	−28

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4268.112	2	*MB*	23422.971			4277.684	30	*MB*	23370.559	$10924°_{4\,1/2}-34295_{4\,1/2}$	−14
4268.298	40	*MB*	23421.950	$5942°_{3\,1/2}-29364_{3\,1/2}$	8	4277.857	25	*MB*	23369.614	$9778°_{2\,1/2}-33148_{2\,1/2}$	11
4268.993	15	*MB*	23418.137			4277.954	2	*MB*	23369.084		
4269.175	25	*MB*	23417.139	$6389°_{4\,1/2}-29807_{3\,1/2}$	3	4277.999	7	*MB*	23368.838	$9491°_{0\,1/2}-32860_{0\,1/2}$	−21
4269.256	100	*MB*	23416.694	$7818°_{1\,1/2}-31234_{2\,1/2}$	−37	4278.247	30	*MB*	23367.484	$10798°_{2\,1/2}-34166_{1\,1/2}$	0
4269.355	7	*MB*	23416.152	$9634°_{1\,1/2}-33050_{1\,1/2}$	47	4278.325	7	*MB*	23367.058	$14827_{3\,1/2}-38194°_{4\,1/2}$	−46
4269.375	15	*MB*	23416.042			4278.415	5	*MB*	23366.566	$14481°_{2\,1/2}-37848_{2\,1/2}$	−53
4269.462	5	*MB*	23415.565			4278.738	2	*MB*	23364.802		
4269.535	7	*MB*	23415.164			4278.863	140	*MB*	23364.120	$2581°_{4\,1/2}-25945_{3\,1/2}$	−18
4269.570	30	*MB*	23414.972			4279.161	25	*MB*	23362.493	$7713°_{4\,1/2}-31075_{4\,1/2}$	−20
4269.842	5	*MB*	23413.481			4279.946	17	*MB*	23358.208	$7278°_{1\,1/2}-30637_{2\,1/2}$	−26
4269.970	2	*MB*	23412.779			4280.139	100	*MB*	23357.155	$5924°_{1\,1/2}-29281_{2\,1/2}$	−14
4270.186	440	*MB*	23411.595	$4523°_{4\,1/2}-27934_{4\,1/2}$	−9	4280.181	5	*MB*	23356.925		
4270.312	15	*MB*	23410.904	$9634°_{1\,1/2}-33045_{2\,1/2}$	−4	4280.319	25	*MB*	23356.172	$9723°_{4\,1/2}-33079_{3\,1/2}$	−4
4270.714	280	*MB*	23408.700	$7722_{2\,1/2}-31130°_{3\,1/2}$	3	4280.711	12	*MB*	23354.033	$10454°_{1\,1/2}-33808_{2\,1/2}$	−11
4270.842	15	*MB*	23407.999	$13515°_{3\,1/2}-36923_{4\,1/2}$	63	4280.989	80	*MB*	23352.517	$7818°_{1\,1/2}-31170_{1\,1/2}$	19
4271.058	25	*MB*	23406.815	$11454_{6\,1/2}-34861°_{5\,1/2}$	−9					$4459°_{3\,1/2}-27812_{2\,1/2}$	−8
4271.216	2	*MB*	23405.949			4281.153	60	*MB*	23351.622	$4459°_{3\,1/2}-27811_{3\,1/2}$	−1
4271.473	25	*MB*	23404.541	$6389°_{4\,1/2}-29794_{3\,1/2}$	−33	4281.404	12	*MB*	23350.253	$12365°_{4\,1/2}-35716_{5\,1/2}$	−23
4271.602	10	*MB*	23403.834			4281.562	17	*MB*	23349.392	$12762°_{4\,1/2}-36112_{3\,1/2}$	12
4271.727	25	*MB*	23403.149	$11458_{5\,1/2}-34861°_{5\,1/2}$	−23	4281.905	40	*MB*	23347.522	$5819°_{4\,1/2}-29166_{4\,1/2}$	38
4272.225	10	*MB*	23400.421			4282.015	20	*MB*	23346.922		
4272.263	7	*MB*	23400.213	$12057°_{2\,1/2}-35457_{1\,1/2}$	2	4282.322	15	*MB*	23345.248		
4272.336	20	*MB*	23399.813	$5964°_{3\,1/2}-29364_{3\,1/2}$	−30	4283.165	12	*MB*	23340.653		
4272.397	2	*MB*	23399.479			4283.553	30	*MB*	23338.539	$5942°_{3\,1/2}-29281_{2\,1/2}$	−36
4272.533	20	*MB*	23398.734			4284.076	17	*MB*	23335.690	$10641°_{2\,1/2}-33977_{3\,1/2}$	−7
4272.676	2	*MB*	23397.951			4284.319	20	*MB*	23334.367	$25753_{6\,1/2}-49087°_{7\,1/2}$	−19
4272.835	10	*MB*	23397.080	$11949°_{3\,1/2}-35346_{3\,1/2}$	−12	4284.444	5	*MB*	23333.686		
4272.995	25	*MB*	23396.204			4284.750	2	*MB*	23332.019		
4273.443	90	*MB*	23393.752	$8804°_{4\,1/2}-32197_{4\,1/2}$	−5	4285.197	25	*MB*	23329.585	$7878°_{3\,1/2}-31207_{3\,1/2}$	−13
4273.935	7	*MB*	23391.059			4285.363	200	*MB*	23328.682	$7341_{5\,1/2}-30669°_{4\,1/2}$	−12
4274.094	10	*MB*	23390.189			4285.680	15	*MB*	23326.956	$5010°_{2\,1/2}-28337_{2\,1/2}$	13
4274.540	30	*MB*	23387.748	$19946°_{1\,1/2}-43334_{0\,1/2}$	−17	4285.981	20	*MB*	23325.318	$11007°_{1\,1/2}-34333_{2\,1/2}$	19
4274.760	15	*MB*	23386.545			4286.240	7	*MB*	23323.909	$4511°_{2\,1/2}-27835_{1\,1/2}$	−66
4275.134	15	*MB*	23384.499			4286.455	15	*MB*	23322.739	$19136°_{2\,1/2}-42458_{1\,1/2}$	20
4275.208	10	*MB*	23384.094			4286.504	17	*MB*	23322.472	$14481°_{2\,1/2}-37804_{1\,1/2}$	−31
4275.386	30	*MB*	23383.120	$17475°_{4\,1/2}-40858_{4\,1/2}$	−61	4286.646	2	*MB*	23321.700		
4275.450	50	*MB*	23382.770	$8175°_{2\,1/2}-31558_{3\,1/2}$	8	4286.922	20	*MB*	23320.198	$19138°_{1\,1/2}-42458_{1\,1/2}$	−10
4275.564	100	*MB*	23382.147	$4523°_{4\,1/2}-27905_{4\,1/2}$	23					$13758°_{1\,1/2}-37078_{1\,1/2}$	−10
4275.905	5	*MB*	23380.282			4287.144	25	*MB*	23318.991	$9053_{3\,1/2}-32372°_{4\,1/2}$	0
4276.014	5	*MB*	23379.686			4287.452	7	*MB*	23317.316		
4276.207	2	*MB*	23378.631			4287.606	25	*MB*	23316.478	$5964°_{3\,1/2}-29281_{2\,1/2}$	0
4276.317	17	*MB*	23378.030	$7259°_{3\,1/2}-30637_{2\,1/2}$	−51	4287.789	5	*MB*	23315.483		
4276.336	7	*MB*	23377.926	$13515°_{3\,1/2}-36893_{3\,1/2}$	9	4287.948	2	*MB*	23314.618	$9725_{3\,1/2}-33040°_{4\,1/2}$	−1
4276.459	5	*MB*	23377.254			4288.662	140	*MB*	23310.737	$2634°_{2\,1/2}-25945_{3\,1/2}$	7
4276.566	12	*MB*	23376.669	$7713°_{4\,1/2}-31089_{5\,1/2}$	27	4288.873	12	*MB*	23309.590		
4276.680	5	*MB*	23376.046			4289.019	5	*MB*	23308.797		
4276.787	7	*MB*	23375.461			4289.277	10	*MB*	23307.395		
4277.332	2	*MB*	23372.482	$15565°_{2\,1/2}-38937_{1\,1/2}$	91	4289.444	140	*MB*	23306.487	$3593°_{4\,1/2}-26900_{3\,1/2}$	16
4277.369	5	*MB*	23372.280			4289.595	40	*MB*	23305.667		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4289.935	1400	*MB*	23303.820	$2641°_{3\,1/2}-25945_{3\,1/2}$	−16	4301.743	2	*MB*	23239.854		
4290.429	35	*MB*	23301.137	$4511°_{2\,1/2}-27812_{2\,1/2}$	−3	4301.774	2	*MB*	23239.686		
4290.596	30	*MB*	23300.230	$4511°_{2\,1/2}-27811_{3\,1/2}$	−8	4301.995	7	*MB*	23238.492		
4290.670	10	*MB*	23299.828	$14315°_{0\,1/2}-37615_{0\,1/2}$	26	4302.115	7	*MB*	23237.844		
4290.895	25	*MB*	23298.606	$8448_{2\,1/2}-31747°_{1\,1/2}$	4	4302.159	10	*MB*	23237.606	$9269°_{0\,1/2}-32507_{1\,1/2}$	−9
				$12260°_{3\,1/2}-35558_{3\,1/2}$	−7	4302.199	7	*MB*	23237.390		
4291.213	5	*MB*	23296.880	$7746°_{2\,1/2}-31043_{2\,1/2}$	−44	4302.565	7	*MB*	23235.414	$16159°_{3\,1/2}-39394_{3\,1/2}$	−42
4291.556	20	*MB*	23295.018	$10114°_{2\,1/2}-33409_{3\,1/2}$	4	4302.653	60	*MB*	23234.938	$10641°_{2\,1/2}-33876_{1\,1/2}$	4
4291.740	7	*MB*	23294.019	$13784°_{1\,1/2}-37078_{1\,1/2}$	−25	4303.235	7	*MB*	23231.796		
4291.879	15	*MB*	23293.265	$5437°_{3\,1/2}-28730_{3\,1/2}$	−24	4303.584	2	*MB*	23229.912		
4292.044	7	*MB*	23292.369			4303.834	5	*MB*	23228.563		
4292.579	80	*MB*	23289.466	$6517°_{2\,1/2}-29807_{3\,1/2}$	7	4304.178	5	*MB*	23226.706		
4292.763	80	*MB*	23288.468	$4523°_{4\,1/2}-27811_{3\,1/2}$	5	4304.277	80	*MB*	23226.172	$9634°_{1\,1/2}-32860_{0\,1/2}$	5
4292.901	25	*MB*	23287.719	$5437°_{3\,1/2}-28725_{4\,1/2}$	−6	4304.718	110	*MB*	23223.793	$5942°_{3\,1/2}-29166_{4\,1/2}$	−5
4293.108	15	*MB*	23286.597	$5010°_{2\,1/2}-28297_{3\,1/2}$	−5	4304.901	40	*MB*	23222.805	$7522°_{0\,1/2}-30745_{1\,1/2}$	−22
										$7202°_{2\,1/2}-30425_{2\,1/2}$	−14
4293.460	12	*MB*	23284.687								
4293.657	5	*MB*	23283.619			4305.140	300	*MB*	23221.516	$6913°_{6\,1/2}-30134_{5\,1/2}$	−1
4293.869	2	*MB*	23282.469			4305.308	20	*MB*	23220.610		
4294.005	2	*MB*	23281.732			4305.608	35	*MB*	23218.992	$5118°_{2\,1/2}-28337_{2\,1/2}$	−15
4294.461	2	*MB*	23279.260			4305.801	5	*MB*	23217.952		
4294.753	50	*MB*	23277.677	$21373_{1\,1/2}-44651°_{1\,1/2}$	−2	4305.835	7	*MB*	23217.768		
				$8280°_{2\,1/2}-31558_{3\,1/2}$	−2	4306.033	7	*MB*	23216.700		
4294.898	30	*MB*	23276.891	$6517°_{2\,1/2}-29794_{3\,1/2}$	−6	4306.288	20	*MB*	23215.326	$7746°_{2\,1/2}-30961_{1\,1/2}$	−6
4295.094	7	*MB*	23275.829			4306.352	10	*MB*	23214.981	$9198°_{3\,1/2}-32413_{3\,1/2}$	−38
4295.446	5	*MB*	23273.922			4306.408	25	*MB*	23214.679	$14315°_{0\,1/2}-37530_{1\,1/2}$	−21
4295.532	7	*MB*	23273.456			4306.452	7	*MB*	23214.442	$7818°_{1\,1/2}-31032_{0\,1/2}$	−21
4295.935	17	*MB*	23271.273	$9778°_{2\,1/2}-33050_{1\,1/2}$	−31	4306.722	550	*MB*	23212.986	$4165_{4\,1/2}-27378°_{5\,1/2}$	22
4296.052	50	*MB*	23270.639	$6638°_{4\,1/2}-29908_{4\,1/2}$	−6	4307.080	20	*MB*	23211.057		
4296.081	140	*MB*	23270.482	$8927°_{5\,1/2}-32197_{4\,1/2}$	14	4307.612	12	*MB*	23208.190		
4296.367	30	*MB*	23268.933	$6521°_{1\,1/2}-29790_{0\,1/2}$	−4	4308.226	7	*MB*	23204.883	$10703_{4\,1/2}-33908°_{4\,1/2}$	−4
4296.680	1100	*MB*	23267.238	$4165_{4\,1/2}-27432°_{4\,1/2}$	6	4308.396	12	*MB*	23203.967		
4296.778	300	*MB*	23266.707	$6913°_{6\,1/2}-30180_{6\,1/2}$	3	4308.708	5	*MB*	23202.287		
4296.884	30	*MB*	23266.133	$9778°_{2\,1/2}-33045_{2\,1/2}$	24	4308.818	7	*MB*	23201.695	$5964°_{3\,1/2}-29166_{4\,1/2}$	−5
4297.193	25	*MB*	23264.460	$13659°_{4\,1/2}-36923_{4\,1/2}$	0	4309.118	5	*MB*	23200.080		
4297.243	2	*MB*	23264.190			4309.246	25	*MB*	23199.391	$8169°_{1\,1/2}-31369_{2\,1/2}$	−3
4297.367	5	*MB*	23263.518	$9725_{3\,1/2}-32989°_{3\,1/2}$	33	4309.577	80	*MB*	23197.609	$5969°_{5\,1/2}-29166_{4\,1/2}$	19
4297.569	15	*MB*	23262.425			4309.735	280	*MB*	23196.758	$3703°_{3\,1/2}-26900_{3\,1/2}$	−1
4297.813	20	*MB*	23261.104	$10035°_{5\,1/2}-33296_{4\,1/2}$	10	4310.246	15	*MB*	23194.008		
4297.937	5	*MB*	23260.433			4310.393	20	*MB*	23193.217	$8175°_{2\,1/2}-31369_{2\,1/2}$	−12
4298.172	20	*MB*	23259.161	$15576_{1\,1/2}-38835°_{2\,1/2}$	−4	4310.635	25	*MB*	23191.915	$10684°_{0\,1/2}-33876_{1\,1/2}$	−20
4298.472	7	*MB*	23257.538			4310.696	110	*MB*	23191.587	$3995°_{3\,1/2}-27187_{3\,1/2}$	0
4298.823	17	*MB*	23255.639			4310.948	10	*MB*	23190.231	$2563°_{5\,1/2}-25753_{6\,1/2}$	−28
4299.090	50	*MB*	23254.195	$3995°_{3\,1/2}-27249_{2\,1/2}$	−13	4311.593	80	*MB*	23186.762	$11742°_{5\,1/2}-34928_{4\,1/2}$	38
4299.357	420	*MB*	23252.751	$1410°_{4\,1/2}-24663_{4\,1/2}$	0					$7059°_{4\,1/2}-30245_{4\,1/2}$	−43
4299.986	2	*MB*	23249.349			4311.839	2	*MB*	23185.439		
4300.188	30	*MB*	23248.257	$4266°_{3\,1/2}-27514_{3\,1/2}$	−5	4312.228	2	*MB*	23183.348		
4300.327	550	*MB*	23247.506	$3593°_{4\,1/2}-26841_{4\,1/2}$	4	4312.339	7	*MB*	23182.751		
4300.861	30	*MB*	23244.619	$6549°_{2\,1/2}-29794_{3\,1/2}$	10	4312.556	17	*MB*	23181.585	$9053_{3\,1/2}-32235°_{3\,1/2}$	−24
4301.217	10	*MB*	23242.696			4312.777	5	*MB*	23180.397		
4301.637	5	*MB*	23240.426			4312.857	20	*MB*	23179.967	$7522°_{5\,1/2}-30702_{4\,1/2}$	−21

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4313.102	25	*MB*	23178.650	$5118°_{2\,1/2}-28297_{3\,1/2}$	−16	4325.109	25	*MB*	23114.305	$3703°_{3\,1/2}-26817_{2\,1/2}$	−36
4313.225	2	*MB*	23177.989			4325.679	5	*MB*	23111.259		
4313.346	2	*MB*	23177.339	$8789_{2\,1/2}-31966°_{2\,1/2}$	−28	4325.768	7	*MB*	23110.783		
4313.593	30	*MB*	23176.012	$4203°_{6\,1/2}-27379_{5\,1/2}$	−2	4325.923	2	*MB*	23109.955	$2382°_{4\,1/2}-25492_{5\,1/2}$	−49
4313.793	12	*MB*	23174.937			4326.058	2	*MB*	23109.234		
4313.857	12	*MB*	23174.593	$14963°_{5\,1/2}-38137_{5\,1/2}$	12	4326.176	2	*MB*	23108.604		
4314.471	30	*MB*	23171.295	$14963°_{5\,1/2}-38134_{4\,1/2}$	−4	4326.320	2	*MB*	23107.835		
4314.629	7	*MB*	23170.447			4326.480	20	*MB*	23106.980	$7059°_{4\,1/2}-30166_{3\,1/2}$	−4
4314.933	40	*MB*	23168.815	$6638°_{4\,1/2}-29807_{3\,1/2}$	−4	4326.565	25	*MB*	23106.526	$14481°_{2\,1/2}-37588_{3\,1/2}$	−16
4314.978	20	*MB*	23168.573	$12057°_{2\,1/2}-35225_{2\,1/2}$	24	4326.821	50	*MB*	23105.159	$5924°_{1\,1/2}-29029_{1\,1/2}$	10
4315.295	30	*MB*	23166.871	$10641°_{2\,1/2}-33808_{2\,1/2}$	−3	4327.402	15	*MB*	23102.057	$11759_{5\,1/2}-34861°_{5\,1/2}$	−1
4315.405	70	*MB*	23166.281	$7259°_{3\,1/2}-30425_{2\,1/2}$	7	4327.497	20	*MB*	23101.550		
4315.484	17	*MB*	23165.856	$987°_{4\,1/2}-24153_{3\,1/2}$	2	4327.737	20	*MB*	23100.269	$11325°_{2\,1/2}-34426_{2\,1/2}$	13
4315.584	12	*MB*	23165.320	$8402°_{3\,1/2}-31568_{4\,1/2}$	−30	4327.799	17	*MB*	23099.938	$13012°_{2\,1/2}-36112_{3\,1/2}$	12
4315.683	30	*MB*	23164.788	$7878°_{3\,1/2}-31043_{2\,1/2}$	7	4327.941	7	*MB*	23099.180		
4316.006	17	*MB*	23163.055	$12762°_{4\,1/2}-35925_{3\,1/2}$	14	4328.104	7	*MB*	23098.310	$10454°_{1\,1/2}-33552_{2\,1/2}$	0
4316.401	20	*MB*	23160.935			4328.153	2	*MB*	23098.048		
4316.638	5	*MB*	23159.663	$9725_{3\,1/2}-32885°_{2\,1/2}$	30	4328.186	12	*MB*	23097.873	$4737°_{2\,1/2}-27835_{1\,1/2}$	13
4316.761	12	*MB*	23159.004			4329.220	2	*MB*	23092.356		
4316.903	7	*MB*	23158.242	$11007°_{1\,1/2}-34166_{1\,1/2}$	2	4329.552	2	*MB*	23090.585		
4317.269	25	*MB*	23156.279	$6638°_{4\,1/2}-29794_{3\,1/2}$	20	4329.930	25	*MB*	23088.569	$10088°_{1\,1/2}-33177_{0\,1/2}$	14
4317.329	100	*MB*	23155.957	$8402°_{3\,1/2}-31558_{3\,1/2}$	0	4330.282	2	*MB*	23086.693		
4317.717	15	*MB*	23153.876			4330.438	220	*MB*	23085.861	$2595°_{1\,1/2}-25681_{1\,1/2}$	17
4317.986	40	*MB*	23152.433	$6521°_{1\,1/2}-29673_{2\,1/2}$	−4	4330.830	7	*MB*	23083.771	$9778°_{2\,1/2}-32862_{3\,1/2}$	−9
4318.049	20	*MB*	23152.096	$11007°_{1\,1/2}-34159_{0\,1/2}$	18	4330.985	2	*WA*	23082.945	$7746°_{2\,1/2}-30829_{3\,1/2}$	6
4318.226	2	*MB*	23151.147			4331.334	5	*MB*	23081.085		
4318.636	30	*MB*	23148.949	$8702°_{1\,1/2}-31851_{2\,1/2}$	−3	4331.572	5	*MB*	23079.817		
4319.066	20	*MB*	23146.644	$9491°_{0\,1/2}-32638_{1\,1/2}$	−27	4331.754	110	*MB*	23078.848	$9723°_{4\,1/2}-32802_{5\,1/2}$	18
4319.104	20	*MB*	23146.441	$7278°_{1\,1/2}-30425_{2\,1/2}$	14	4331.944	25	*MB*	23077.835	$10798°_{2\,1/2}-33876_{1\,1/2}$	14
4319.682	17	*MB*	23143.344	$7818°_{1\,1/2}-30961_{1\,1/2}$	−26	4332.017	2	*MB*	23077.446		
4319.828	5	*MB*	23142.561			4332.160	5	*MB*	23076.685		
4320.167	12	*MB*	23140.745	$12057°_{2\,1/2}-35197_{1\,1/2}$	13	4332.318	17	*MB*	23075.843	$7059°_{4\,1/2}-30134_{5\,1/2}$	5
4320.415	2	*MB*	23139.417	$9723°_{4\,1/2}-32862_{3\,1/2}$	−14	4332.469	20	*MB*	23075.039	$4737°_{2\,1/2}-27812_{2\,1/2}$	14
4320.720	400	*MB*	23137.784	$3703°_{3\,1/2}-26841_{4\,1/2}$	−5	4332.639	30	*MB*	23074.133	$4737°_{2\,1/2}-27811_{3\,1/2}$	11
4320.975	1	*MB*	23136.418			4332.703	220	*MB*	23073.792	$5651°_{5\,1/2}-28725_{4\,1/2}$	2
4321.255	35	*MB*	23134.919	$10274°_{3\,1/2}-33409_{3\,1/2}$	−6	4333.234	30	*MB*	23070.965		
4321.813	10	*MB*	23131.932	$15529_{2\,1/2}-38661°_{1\,1/2}$	−11	4333.774	7	*MB*	23068.090		
4322.018	2	*MB*	23130.835			4334.034	2	*MB*	23066.707		
4322.512	2	*MB*	23128.191			4334.320	20	*MB*	23065.185	$8169°_{1\,1/2}-31234_{2\,1/2}$	4
4322.790	30	*MB*	23126.704	$8804°_{4\,1/2}-31930_{4\,1/2}$	−7	4334.626	25	*MB*	23063.556		
4323.203	15	*MB*	23124.495	$17976_{2\,1/2}-41100°_{2\,1/2}$	−23	4334.857	50b	*MB*	23062.327	$8278_{5\,1/2}-31340°_{6\,1/2}$	−11
4323.765	2	*MB*	23121.489			4335.389	17	*MB*	23059.497	$13784°_{1\,1/2}-36844_{2\,1/2}$	27
4323.863	2	*MB*	23120.965			4335.478	40	*MB*	23059.024	$8175°_{2\,1/2}-31234_{2\,1/2}$	8
4323.907	7	*MB*	23120.730			4335.799	2	*MB*	23057.317		
4324.020	7	*MB*	23120.126			4335.953	2	*MB*	23056.498	$23640_{4\,1/2}-46697°_{4\,1/2}$	−22
4324.070	15	*MB*	23119.858	$9198°_{3\,1/2}-32318_{3\,1/2}$	10	4336.085	17	*MB*	23055.796	$12751°_{5\,1/2}-35807_{4\,1/2}$	10
				$10454°_{1\,1/2}-33574_{1\,1/2}$	−14	4336.242	170	*MB*	23054.961	$5675°_{4\,1/2}-28730_{3\,1/2}$	13
4324.124	17	*MB*	23119.570	$10924°_{4\,1/2}-34044_{4\,1/2}$	5	4336.272	110	*MB*	23054.802	$4459°_{3\,1/2}-27514_{3\,1/2}$	14
4324.345	12	*MB*	23118.388			4336.498	25	*MB*	23053.600		
4324.785	110	*MB*	23116.036	$7713°_{4\,1/2}-30829_{3\,1/2}$	2	4336.746	12	*MB*	23052.282	$10924°_{4\,1/2}-33977_{3\,1/2}$	18

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4336.847	20	*MB*	23051.745			4350.389	17	*MB*	22979.990		
4337.137	5	*MB*	23050.204	$19483_{21/2}$ $-42533°_{11/2}$	−29	4350.494	30	*MB*	22979.436	$2382°_{41/2}-25361_{41/2}$	8
4337.290	2	*MB*	23049.391	$5675°_{41/2}-28725_{41/2}$	6	4350.930	5	*MB*	22977.133		
4337.388	20	*MB*	23048.870	$6389°_{41/2}-29438_{51/2}$	−4	4351.367	10	*MB*	22974.826	$6389°_{41/2}-29364_{31/2}$	28
4337.595	25	*MB*	23047.770	$4201°_{11/2}-27249_{21/2}$	−5	4351.664	10	*MB*	22973.258		
4337.773	700	*MB*	23046.824	$2634°_{21/2}-25681_{11/2}$	2	4351.975	12	*MB*	22971.616	$11949°_{31/2}-34920_{31/2}$	17
4338.129	17	*MB*	23044.933	$12762°_{41/2}-35807_{41/2}$	6	4352.020	7	*MB*	22971.378	$3508°_{01/2}-26479_{11/2}$	−72
4338.193	5	*MB*	23044.593	$9269°_{01/2}-32314_{01/2}$	−49	4352.373	1	*WA*	22969.515	$5716°_{31/2}-28685_{21/2}$	−26
4338.955	12	*MB*	23040.546			4352.704	400	*MB*	22967.769	$4844°_{11/2}-27812_{21/2}$	15
4339.071	25	*MB*	23039.930	$4910°_{51/2}-27950_{51/2}$	2	4352.956	25	*MB*	22966.439	$8402°_{31/2}-31369_{21/2}$	14
4339.312	240	*MB*	23038.650	$10869_{41/2}$ $-33908°_{41/2}$	−1	4353.116	25	*MB*	22965.595	$12260°_{31/2}-35225_{21/2}$	27
4339.566	2	*MB*	23037.302			4353.360	120	*MB*	22964.308	$12751°_{51/2}-35716_{51/2}$	7
4339.655	5	*MB*	23036.830			4353.505	25	*MB*	22963.543	$7202°_{21/2}-30166_{31/2}$	15
4340.139	25	*MB*	23034.261			4353.864	30	*MB*	22961.649	$10088°_{11/2}-33050_{11/2}$	−1
4340.202	7	*MB*	23033.927			4353.975	15	*MB*	22961.064		
4340.554	50	*MB*	23032.058	$8175°_{21/2}-31207_{31/2}$	−5	4354.085	20	*MB*	22960.484		
4341.292	7	*MB*	23028.143			4354.378	7	*MB*	22958.939	$2140°_{01/2}-25099_{11/2}$	−50
4341.321	7	*MB*	23027.989			4354.419	17	*MB*	22958.723	$5675°_{41/2}-28634_{51/2}$	−29
4341.452	2	*MB*	23027.295			4354.584	2	*MB*	22957.853	$8789_{21/2}$ $-31747°_{11/2}$	−9
4341.573	2	*MB*	23026.653			4354.724	7	*MB*	22957.115		
4341.731	2	*MB*	23025.815			4354.852	25	*MB*	22956.440	$10088°_{11/2}-33045_{21/2}$	−14
4342.140	40	*MB*	23023.646	$4910°_{51/2}-27934_{41/2}$	−28	4355.156	12	*MB*	22954.838	$11340°_{31/2}-34295_{41/2}$	−13
4342.478	50	*MB*	23021.854	$10274°_{31/2}-33296_{41/2}$	20	4355.339	17	*MB*	22953.873	$8280°_{21/2}-31234_{21/2}$	−59
4342.761	1	*MB*	23020.354	$8131_{41/2}$ $-31151°_{51/2}$	37	4355.425	30	*MB*	22953.420	$12762°_{41/2}-35716_{51/2}$	−21
4342.949	5	*MB*	23019.357			4355.530	7	*MB*	22952.867		
4343.119	7	*MB*	23018.456			4355.920	15	*MB*	22950.812	$7878°_{31/2}-30829_{31/2}$	16
4343.702	25	*MB*	23015.367			4356.060	5	*MB*	22950.074		
4343.863	30	*MB*	23014.514	$5716°_{31/2}-28730_{31/2}$	18	4356.334	2	*MB*	22948.631		
4344.015	5	*MB*	23013.708	$15822_{31/2}$ $-38835°_{21/2}$	34	4356.534	5	*MB*	22947.577	$23640_{41/2}$ $-46588°_{51/2}$	9
4344.289	30	*MB*	23012.257	$7233°_{51/2}-30245_{41/2}$	6	4356.745	25	*MB*	22946.466	$7233°_{51/2}-30180_{61/2}$	−2
4344.765	17	*MB*	23009.736	$10798°_{21/2}-33808_{21/2}$	−25	4356.957	20	*MB*	22945.349	$11387°_{31/2}-34333_{21/2}$	−17
4344.915	25	*MB*	23008.942	$5716°_{31/2}-28725_{41/2}$	10	4357.313	2	*MB*	22943.475		
4345.199	15	*MB*	23007.438	$14963°_{51/2}-37970_{51/2}$	6	4357.598	2	*MB*	22941.974		
4345.449	30	*MB*	23006.114	$7059°_{41/2}-30065_{31/2}$	22	4357.908	40	*MB*	22940.342	$9198°_{31/2}-32138_{21/2}$	−29
4345.846	50	*MB*	23004.012	$9634°_{11/2}-32638_{11/2}$	34	4358.165	2	*MB*	22938.989		
4345.954	110	*MB*	23003.441	$8927°_{51/2}-31930_{41/2}$	19	4358.319	2	*MB*	22938.179	$18147°_{21/2}-41085_{31/2}$	−29
4346.429	50	*MB*	23000.927	$8169°_{11/2}-31170_{11/2}$	−19	4358.424	12	*MB*	22937.626	$9778°_{21/2}-32716_{21/2}$	−34
4346.661	12	*MB*	22999.699	$9198°_{31/2}-32197_{41/2}$	43	4359.070	70	*MB*	22934.227	$8804°_{41/2}-31738_{51/2}$	−32
4346.771	5	*MB*	22999.117	$7746°_{21/2}-30745_{11/2}$	16	4359.362	12	*MB*	22932.691	$10641°_{21/2}-33574_{11/2}$	−11
4347.588	20	*MB*	22994.795	$8175°_{21/2}-31170_{11/2}$	13	4359.601	5	*MB*	22931.434		
4347.694	30	*MB*	22994.235	$4910°_{51/2}-27905_{41/2}$	41	4359.847	2	*MB*	22930.140	$10114°_{21/2}-33045_{21/2}$	−71
4348.019	10	*MB*	22992.516	$11340°_{31/2}-34333_{21/2}$	16	4359.931	17	*MB*	22929.698	$12097_{31/2}$ $-35026°_{41/2}$	30
4348.072	2	*MB*	22992.236			4360.059	15	*MB*	22929.025	$2563°_{51/2}-25492_{51/2}$	7
4348.182	25	*MB*	22991.654	$4523°_{41/2}-27514_{31/2}$	27	4360.165	70	*MB*	22928.468	$6521°_{11/2}-29449_{11/2}$	22
4348.326	25	*MB*	22990.893	$12466°_{11/2}-35457_{11/2}$	5	4360.414	20	*MB*	22927.158	$7818°_{11/2}-30745_{11/2}$	19
4348.585	15	*MB*	22989.523	$7713°_{41/2}-30702_{41/2}$	3	4360.444	30	*MB*	22927.001	$8280°_{21/2}-31207_{31/2}$	20
4349.103	12	*MB*	22986.785	$7259°_{31/2}-30245_{41/2}$	−17	4360.619	17	*MB*	22926.080		
4349.399	20	*MB*	22985.221	$11949°_{31/2}-34934_{21/2}$	−12	4360.879	5	*MB*	22924.714		
4349.788	500	*MB*	22983.165	$5651°_{51/2}-28634_{51/2}$	7	4361.060	2	*MB*	22923.762		
4350.299	7	*MB*	22980.466	$12365°_{41/2}-35346_{31/2}$	−9	4361.214	10	*MB*	22922.953		

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TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4361.360	25	*MB*	22922.185	$7061°_{01/2}-29984_{11/2}$	−28	4376.685	1	*MB*	22841.924		
4361.650	90	*MB*	22920.661	$4266°_{31/2}-27187_{31/2}$	11	4376.866	4	*MB*	22840.980	$7293°_{61/2}-30134_{51/2}$	8
4361.937	10	*MB*	22919.153			4378.546	1	*MB*	22832.216	$8402°_{31/2}-31234_{21/2}$	5
4362.431	17	*MB*	22916.558	$14315°_{01/2}-37232_{11/2}$	52	4379.069	5	*MB*	22829.489	$11325°_{21/2}-34155_{31/2}$	−40
4362.642	10	*MB*	22915.450			4380.057	80	*MB*	22824.340	$5010°_{21/2}-27835_{11/2}$	−22
4362.999	7	*MB*	22913.574	$13012°_{21/2}-35925_{31/2}$	−12	4380.314	4	*MB*	22823.001	$9491°_{01/2}-32314_{01/2}$	25
4363.082	17	*MB*	22913.139	$9053_{31/2}-31966°_{21/2}$	20	4381.079	5	*MB*	22819.016	$7818°_{11/2}-30637_{21/2}$	6
4363.194	7	*MB*	22912.551			4381.774	80	*MB*	22815.396	$5819°_{41/2}-28634_{51/2}$	−6
4363.376	25	*MB*	22911.595	$5819°_{41/2}-28730_{31/2}$	−3	4382.164	650	*MB*	22813.366	$5513_{51/2}-28327°_{51/2}$	4
4363.460	16	*MB*	22911.154	$10641°_{21/2}-33552_{21/2}$	14	4382.624	1	*MB*	22810.971	$8927°_{51/2}-31738_{51/2}$	1
4363.771	2	*MB*	22909.521			4383.562	10	*MB*	22806.090	$7259°_{31/2}-30065_{31/2}$	1
4364.111	25	*MB*	22907.736	$11387°_{31/2}-34295_{41/2}$	17	4383.723	7	*MB*	22805.253	$8402°_{31/2}-31207_{31/2}$	−5
4364.434	17	*MB*	22906.041	$5819°_{41/2}-28725_{41/2}$	6	4383.866	9	*MB*	22804.509	$10274°_{31/2}-33079_{31/2}$	−31
4364.650	650	*MB*	22904.907	$3995°_{31/2}-26900_{31/2}$	13	4383.986	1	*MB*	22803.884		
4364.923	5	*MB*	22903.475			4384.438	4	*MB*	22801.534	$5010°_{21/2}-27812_{21/2}$	6
4365.128	12	*MB*	22902.399			4384.533	1	*MB*	22801.040		
4365.339	20	*MB*	22901.292	$7233°_{51/2}-30134_{51/2}$	9	4384.627	1	*MB*	22800.551	$6638°_{41/2}-29438_{51/2}$	−7
4365.511	20	*MB*	22900.390	$5437°_{31/2}-28337_{21/2}$	−1	4384.768	2	*MB*	22799.818		
4365.697	17	*MB*	22899.414			4385.311	3	*MB*	22796.995	$10314_{41/2}-33111°_{31/2}$	−5
4366.095	17	*MB*	22897.327	$5437°_{31/2}-28334_{41/2}$	−6	4385.483	3	*MB*	22796.101	$12762°_{41/2}-35558_{31/2}$	40
4366.506	20	*MB*	22895.172	$19138°_{11/2}-42033_{21/2}$	51	4385.645	1	*MB*	22795.258	$29263°_{51/2}-52058_{41/2}$	10
4366.993	70	*MB*	22892.618	$11015_{31/2}-33908°_{41/2}$	5	4386.304	5	*MB*	22791.834	$8169°_{11/2}-30961_{11/2}$	14
4367.304	25	*MB*	22890.988	$25766°_{41/2}-48657_{31/2}$	7	4386.367	50	*MB*	22791.506	$7202°_{21/2}-29994_{21/2}$	−5
				$7746°_{21/2}-30637_{21/2}$	16	4386.697	120	*MB*	22789.792	$4459°_{31/2}-27249_{21/2}$	−4
4367.547	50	*MB*	22889.715	$10684°_{01/2}-33574_{11/2}$	11	4386.826	500	*MB*	22789.122	$1873°_{31/2}-24663_{41/2}$	1
				$8280°_{21/2}-31170_{11/2}$	16						
						4387.057	8	*MB*	22787.922	$5942°_{31/2}-28730_{31/2}$	8
4367.804	15	*MB*	22888.368			4387.491	4	*MB*	22785.668	$8175°_{21/2}-30961_{11/2}$	13
4368.225	60	*MB*	22886.162	$7293°_{61/2}-30180_{61/2}$	4	4388.003	220	*MB*	22783.009	$6967_{61/2}-29750°_{51/2}$	9
4369.234	50	*MB*	22880.877	$7011_{41/2}-29892°_{31/2}$	4	4388.288	3	*MB*	22781.529	$7202°_{21/2}-29984_{11/2}$	7
4369.422	12	*MB*	22879.892			4388.751	1	*MB*	22779.126	$19950_{61/2}-42729°_{51/2}$	20
4369.715	7	*MB*	22878.358			4389.100	4	*MB*	22777.315	$4737°_{21/2}-27514_{31/2}$	28
4370.496	2	*MB*	22874.270			4389.457	1	*MB*	22775.463	$28396°_{21/2}-51171_{31/2}$	32
4370.630	17	*MB*	22873.569	$10274°_{31/2}-33148_{21/2}$	−48	4389.798	4	*MB*	22773.693	$10820_{21/2}-33594°_{21/2}$	28
4370.684	15	*MB*	22873.286	$9634°_{11/2}-32507_{11/2}$	30	4389.987	2	*MB*	22772.713		
4371.342	7	*MB*	22869.843			4390.276	120	*MB*	22771.214	$11742°_{51/2}-34513_{61/2}$	−8
4371.585	5	*MB*	22868.572	$11007°_{11/2}-33876_{11/2}$	−5	4390.482	5	*MB*	22770.145	$10274°_{31/2}-33045_{21/2}$	22
4371.844	17	*MB*	22867.217	$8175°_{21/2}-31043_{21/2}$	−29	4390.761	1	*MB*	22768.699	$9723°_{41/2}-32492_{51/2}$	−3
4372.392	70	*MB*	22864.351	$4322°_{21/2}-27187_{31/2}$	13	4390.805	4	*MB*	22768.470	$10641°_{21/2}-33409_{31/2}$	16
4372.450	10	*MB*	22864.048	$11949°_{31/2}-34813_{21/2}$	35	4391.187	2	*MB*	22766.490	$10035°_{51/2}-32802_{51/2}$	36
4372.672	15	*MB*	22862.887	$8169°_{11/2}-31032_{01/2}$	−25	4391.319	5	*MB*	22765.806	$5964°_{31/2}-28730_{31/2}$	−9
4372.708	12	*MB*	22862.699	$7202°_{21/2}-30065_{31/2}$	64	4391.660	1200	*MB*	22764.038	$2595°_{11/2}-25359_{21/2}$	−3
4372.879	2	*MB*	22861.805			4392.010	15	*MB*	22762.224	$8280°_{21/2}-31043_{21/2}$	60
4373.214	35b	*MB*	22860.054	$5437°_{31/2}-28297_{31/2}$	3	4392.401	5	*MB*	22760.197	$5964°_{31/2}-28725_{41/2}$	−54
4373.819	250	*MB*	22856.892	$4523°_{41/2}-27379_{51/2}$	−23	4392.425	2	*MB*	22760.073	$6521°_{11/2}-29281_{21/2}$	31
4374.934	2	*MB*	22851.066			4392.665	4	*MB*	22758.830	$7878°_{31/2}-30637_{21/2}$	1
4375.169	35	*MB*	22849.839	$7059°_{41/2}-29908_{41/2}$	7	4393.181	110	*MB*	22756.157	$5969°_{51/2}-28725_{41/2}$	16
4375.688	2	*MB*	22847.129	$6517°_{21/2}-29364_{31/2}$	8	4393.512	4	*MB*	22754.442	$8804°_{41/2}-31558_{31/2}$	40
4375.920	380	*MB*	22845.918	$3995°_{31/2}-26841_{41/2}$	−5	4394.271	4	*MB*	22750.512	$14481°_{21/2}-37232_{11/2}$	4
4376.073	1	*MB*	22845.119			4394.772	60	*MB*	22747.919	$10114°_{21/2}-32862_{31/2}$	35
4376.533	1	*MB*	22842.718			4395.351	2	*MB*	22744.922		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
4396.432	3	*MB*	22739.329	$9198°_{3/2}-31937_{3/2}$	3	4412.506	1	*MB*	22656.496		
4396.556	50	*MB*	22738.688	$7011_{4/2}-29750°_{5/2}$	−54	4413.131	2	*MB*	22653.287	$8175°_{2/2}-30829_{3/2}$	26
4396.609	5	*MB*	22738.414	$4511°_{2/2}-27249_{2/2}$	2	4413.193	80	*MB*	22652.969	$987°_{4/2}-23640_{4/2}$	17
4396.929	1	*MB*	22736.759			4413.799	50	*MB*	22649.858	$9316_{3/2}-31966°_{2/2}$	23
4397.183	4	*MB*	22735.446	$7059°_{4/2}-29794_{3/2}$	1					$7259°_{3/2}-29908_{4/2}$	30
4397.275	6	*MB*	22734.970	$7259°_{3/2}-29994_{2/2}$	4	4415.620	5	*MB*	22640.518	$8927°_{5/2}-31568_{4/2}$	13
4397.686	5	*MB*	22732.846	$5616_{4/2}-28349°_{3/2}$	3	4416.397	1	*MB*	22636.535	$11340°_{3/2}-33977_{3/2}$	−6
4397.853	5	*MB*	22731.982	$13784°_{1/2}-36516_{1/2}$	19	4416.811	5	*MB*	22634.413	$9778°_{2/2}-32413_{3/2}$	53
4397.974	5	*MB*	22731.357	$12466°_{1/2}-35197_{1/2}$	−52	4416.899	220	*MB*	22633.962	$4266°_{3/2}-26900_{3/2}$	5
4398.537	5	*MB*	22728.447	$9778°_{2/2}-32507_{1/2}$	−8	4417.899	1	*MB*	22628.839		
				$7061°_{0/2}-29790_{0/2}$	16						
						4418.058	2	*MB*	22628.025	$10088°_{1/2}-32716_{2/2}$	18
4398.782	140	*MB*	22727.182	$4459°_{3/2}-27187_{3/2}$	7	4418.291	3	*MB*	22626.831	$1873°_{3/2}-24500_{2/2}$	9
4399.198	360	*MB*	22725.032	$2634°_{2/2}-25359_{2/2}$	13	4418.778	700	*MB*	22624.337	$6967_{6/2}-29591°_{6/2}$	12
4399.541	6	*MB*	22723.261	$7522°_{5/2}-30245_{4/2}$	5	4419.047	1	*MB*	22622.960		
4400.145	8	*MB*	22720.141	$2641°_{3/2}-25361_{4/2}$	27	4419.297	50	*MB*	22621.681	$5675°_{4/2}-28297_{3/2}$	−28
4400.535	50	*MB*	22718.128	$2641°_{3/2}-25359_{2/2}$	1	4419.552	1	*MB*	22620.375		
4400.864	50	*MB*	22716.430	$5118°_{2/2}-27835_{1/2}$	3	4419.645	1	*MB*	22619.899	$15517°_{6/2}-38137_{5/2}$	−10
4401.157	3	*MB*	22714.917			4419.681	4	*MB*	22619.715		
4401.431	9	*MB*	22713.504			4419.907	2	*MB*	22618.559	$5716°_{3/2}-28334_{4/2}$	19
4401.772	1	*MB*	22711.744			4420.733	1	*MB*	22614.333		
4401.993	5	*MB*	22710.604	$12057°_{2/2}-34767_{1/2}$	20	4421.139	4	*MB*	22612.256	$7522°_{5/2}-30134_{5/2}$	−32
4402.203	1	*MB*	22709.520							$19136°_{2/2}-41748_{1/2}$	1
4402.265	1	*MB*	22709.200			4421.315	2	*MB*	22611.356	$10798°_{2/2}-33409_{3/2}$	14
4402.572	1	*WA*	22707.617	$18393_{3/2}-41100°_{2/2}$	12	4421.710	4	*MB*	22609.336		
4403.299	40	*MB*	22703.868	$11340°_{3/2}-34044_{4/2}$	25	4422.137	4	*MB*	22607.152	$7818°_{1/2}-30425_{2/2}$	−49
4403.557	4	*MB*	22702.538	$16133_{2/2}-38835°_{2/2}$	−1	4422.650	2	*MB*	22604.530	$7202°_{2/2}-29807_{3/2}$	−18
4404.057	3	*MB*	22699.960			4423.186	1	*MB*	22601.791	$10114°_{2/2}-32716_{2/2}$	28
4405.151	5	*MB*	22694.323	$10454°_{1/2}-33148_{2/2}$	6	4423.674	140	*MB*	22599.298	$8531_{3/2}-31130°_{3/2}$	−6
4405.292	8	*MB*	22693.597	$5118°_{2/2}-27812_{2/2}$	5	4424.130	4	*MB*	22596.969	$14481°_{2/2}-37078_{1/2}$	20
4405.466	50	*MB*	22692.700	$5118°_{2/2}-27811_{3/2}$	10	4424.312	5	*MB*	22596.039	$10454°_{1/2}-33050_{1/2}$	20
4405.982	2	*MB*	22690.043	$9723°_{4/2}-32413_{3/2}$	32	4424.478	1	*MB*	22595.191		
4407.274	120	*MB*	22683.391	$5651°_{5/2}-28334_{4/2}$	−7	4424.545	3	*MB*	22594.849	$9723°_{4/2}-32318_{3/2}$	9
4407.818	4	*MB*	22680.592	$8280°_{2/2}-30961_{1/2}$	20	4425.101	3	*MB*	22592.010	$7202°_{2/2}-29794_{3/2}$	22
4408.095	1	*MB*	22679.167	$7746°_{2/2}-30425_{2/2}$	3	4425.322	5	*MB*	22590.882	$10454°_{1/2}-33045_{2/2}$	59
4408.501	1	*MB*	22677.078			4427.067	220	*MB*	22581.978	$3363°_{2/2}-25945_{3/2}$	9
4408.752	5	*MB*	22675.787	$4511°_{2/2}-27187_{3/2}$	−2	4427.205	5	*MB*	22581.274	$5716°_{3/2}-28297_{3/2}$	17
4408.854	45	*MB*	22675.262	$7233°_{5/2}-29908_{4/2}$	−14	4427.733	4	*MB*	22578.581	$11015_{3/2}-33594°_{2/2}$	8
4408.903	24	*MB*	22675.010	$10314_{4/2}-32989°_{3/2}$	−45	4427.915	340	*MB*	22577.653	$4322°_{2/2}-26900_{3/2}$	7
4409.034	4	*MB*	22674.337	$12260°_{3/2}-34934_{2/2}$	2	4428.202	8	*MB*	22576.190	$0°_{3/2}-22576_{2/2}$	20
4409.306	3	*MB*	22672.938	$8402°_{3/2}-31075_{4/2}$	3	4428.434	220	*MB*	22575.007	$4266°_{3/2}-26841_{4/2}$	20
4409.710	1	*MB*	22670.861			4428.669	5	*MB*	22573.809		
4410.109	1	*MB*	22668.810	$12260°_{3/2}-34928_{4/2}$	−70	4429.265	460	*MB*	22570.772	$8774_{4/2}-31344°_{3/2}$	8
4410.527	4	*MB*	22666.661	$8702°_{1/2}-31369_{2/2}$	13	4429.450	3	*MB*	22569.829		
4410.637	250	*MB*	22666.096	$10869_{4/2}-33535°_{3/2}$	1	4429.522	3	*MB*	22569.462	$8175°_{2/2}-30745_{1/2}$	39
4410.758	250	*MB*	22665.474	$7454_{1/2}-30120°_{1/2}$	19	4429.989	50	*MB*	22567.083	$16268_{1/2}-38835°_{2/2}$	22
4411.036	1	*MB*	22664.046	$4523°_{4/2}-27187_{3/2}$	32	4430.127	2	*MB*	22566.380	$11007°_{1/2}-33574_{1/2}$	34
4411.681	8	*MB*	22660.732	$12260°_{3/2}-34920_{3/2}$	33	4430.363	4	*MB*	22565.178		
4412.017	90	*MB*	22659.007	$5675°_{4/2}-28334_{4/2}$	14	4430.469	1	*MB*	22564.638		
4412.311	4	*MB*	22657.497	$7522°_{5/2}-30180_{6/2}$	23	4430.754	1	*MB*	22563.187	$12365°_{4/2}-34928_{4/2}$	24
4412.466	1	*MB*	22656.701	$11387°_{3/2}-34044_{4/2}$	−8	4431.019	4	*MB*	22561.837		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4432.279	3	*WA*	22555.424	$8789_{2\,1/2} - 31344°_{3\,1/2}$	−23	4452.504	4	*MB*	22452.970	$7713°_{4\,1/2} - 30166_{3\,1/2}$	2
4432.360	1	*MB*	22555.011	$12365°_{4\,1/2} - 34920_{3\,1/2}$	30	4452.552	40	*MB*	22452.728	$15517°_{6\,1/2} - 37970_{5\,1/2}$	−31
4432.717	40	*MB*	22553.195	$11742°_{5\,1/2} - 34295_{4\,1/2}$	−9					$13659°_{4\,1/2} - 36112_{3\,1/2}$	36
4432.911	50	*MB*	22552.208	$5283°_{0\,1/2} - 27835_{1\,1/2}$	4	4453.156	40	*MB*	22449.682	$4737°_{2\,1/2} - 27187_{3\,1/2}$	9
4433.224	2	*MB*	22550.616	$11325°_{2\,1/2} - 33876_{1\,1/2}$	20	4454.040	3	*MB*	22445.227	$13012°_{2\,1/2} - 35457_{1\,1/2}$	4
4433.328	1	*MB*	22550.087	$10314_{4\,1/2} - 32864°_{5\,1/2}$	−28	4454.983	60	*MB*	22440.476	$4459°_{3\,1/2} - 26900_{3\,1/2}$	−5
4433.700	18	*MB*	22548.195	$8280°_{2\,1/2} - 30829_{3\,1/2}$	17	4455.455	2	*MB*	22438.099	$10641°_{2\,1/2} - 33079_{3\,1/2}$	29
4433.736	18	*MB*	22548.011	$7259°_{3\,1/2} - 29807_{3\,1/2}$	9	4455.650	60	*MB*	22437.117	$2382°_{4\,1/2} - 24819_{3\,1/2}$	29
4434.372	3	*WA*	22544.778	$11007°_{1\,1/2} - 33552_{2\,1/2}$	−4	4455.870	4	*MB*	22436.009		
4434.671	1	*MB*	22543.257	$13659°_{4\,1/2} - 36202_{4\,1/2}$	30	4457.766	30	*MB*	22426.466	$8402°_{3\,1/2} - 30829_{3\,1/2}$	11
4434.952	4	*WA*	22541.829			4458.288	1	*MB*	22423.841	$11387°_{3\,1/2} - 33811_{4\,1/2}$	5
4435.468	2	*MB*	22539.207	$9778°_{2\,1/2} - 32318_{3\,1/2}$	18	4458.829	4	*MB*	22421.120	$5924°_{1\,1/2} - 28345_{0\,1/2}$	8
4435.599	4	*MB*	22538.541	$8131_{4\,1/2} - 30669°_{4\,1/2}$	57	4459.073	4	*MB*	22419.893	$7746°_{2\,1/2} - 30166_{3\,1/2}$	21
4436.061	6	*MB*	22536.194			4459.328	1	*MB*	22418.611		
4436.206	7	*MB*	22535.457	$7259°_{3\,1/2} - 29794_{3\,1/2}$	16	4459.778	9	*MB*	22416.349		
4436.737	2	*WA*	22532.760	$7713°_{4\,1/2} - 30245_{4\,1/2}$	−28	4460.204	1700	*MB*	22414.208	$3854_{3\,1/2} - 26268°_{3\,1/2}$	17
4437.298	4	*MB*	22529.912	$13758°_{1\,1/2} - 36288_{0\,1/2}$	−76	4461.131	320	*MB*	22409.551	$7341_{5\,1/2} - 29750°_{5\,1/2}$	11
4437.608	80	*MB*	22528.338	$16133_{2\,1/2} - 38661°_{1\,1/2}$	12	4461.366	1	*MB*	22408.370	$15565°_{2\,1/2} - 37973_{3\,1/2}$	15
				$6638°_{4\,1/2} - 29166_{4\,1/2}$	0	4461.820	1	*MB*	22406.090	$10454°_{1\,1/2} - 32860_{0\,1/2}$	9
4438.184	3	*WA*	22525.414	$6913°_{6\,1/2} - 29438_{5\,1/2}$	−10	4462.030	3	*MB*	22405.036	$4844°_{1\,1/2} - 27249_{2\,1/2}$	11
4439.240	60	*MB*	22520.056	$11015_{3\,1/2} - 33535°_{3\,1/2}$	0	4462.295	4	*MB*	22403.705	$8804°_{4\,1/2} - 31207_{3\,1/2}$	2
4440.112	4	*MB*	22515.633	$5819°_{4\,1/2} - 28334_{4\,1/2}$	−9	4463.406	300	*MB*	22398.129	$7722_{2\,1/2} - 30120°_{1\,1/2}$	8
4440.879	90	*MB*	22511.745	$6517°_{2\,1/2} - 29029_{1\,1/2}$	11	4463.855	6	*MB*	22395.876	$5118°_{2\,1/2} - 27514_{3\,1/2}$	22
4441.329	2	*WA*	22509.464	$9725_{3\,1/2} - 32235°_{3\,1/2}$	−41	4464.170	40	*MB*	22394.296	$10646_{5\,1/2} - 33040°_{4\,1/2}$	13
4441.615	5	*MB*	22508.014	$6521°_{1\,1/2} - 29029_{1\,1/2}$	−6	4464.453	1	*WA*	22392.876	$16268_{1\,1/2} - 38661°_{1\,1/2}$	29
4441.789	1	*MB*	22507.132	$10641°_{2\,1/2} - 33148_{2\,1/2}$	−14	4464.698	100	*MB*	22391.647	$8278_{5\,1/2} - 30669°_{4\,1/2}$	0
4442.345	2	*MB*	22504.316			4465.208	2	*MB*	22389.090	$4511°_{2\,1/2} - 26900_{3\,1/2}$	−6
4442.395	2	*MB*	22504.062			4465.434	30	*MB*	22387.956	$7061°_{0\,1/2} - 29449_{1\,1/2}$	17
4443.289	2	*MB*	22499.534	$17976_{2\,1/2} - 40475°_{3\,1/2}$	23	4465.778	2	*MB*	22386.232	$7522°_{5\,1/2} - 29908_{4\,1/2}$	−49
4443.748	110	*MB*	22497.211	$5437°_{3\,1/2} - 27934_{4\,1/2}$	−4	4466.240	1	*MB*	22383.916	$11949°_{3\,1/2} - 34333_{2\,1/2}$	8
4443.926	1	*MB*	22496.310	$9269°_{0\,1/2} - 31766_{1\,1/2}$	27	4466.555	1	*MB*	22382.338	$16159°_{3\,1/2} - 38541_{4\,1/2}$	1
4444.388	340	*MB*	22493.971	$7454_{1\,1/2} - 29948°_{2\,1/2}$	8	4466.785	3	*MB*	22381.185	$16454_{2\,1/2} - 38835°_{2\,1/2}$	7
4444.697	320	*MB*	22492.407	$8531_{3\,1/2} - 31024°_{2\,1/2}$	9	4467.073	5	*MB*	22379.742	$7059°_{4\,1/2} - 29438_{5\,1/2}$	−2
4445.569	2	*MB*	22487.995			4467.555	200	*MB*	22377.328	$4523°_{4\,1/2} - 26900_{3\,1/2}$	7
4446.151	40	*MB*	22485.052	$10924°_{4\,1/2} - 33409_{3\,1/2}$	31	4468.025	3	*MB*	22374.974	$5437°_{3\,1/2} - 27812_{2\,1/2}$	−1
4446.639	3	*MT*	22482.584	$11325°_{2\,1/2} - 33808_{2\,1/2}$	48	4468.433	1	*MB*	22372.931	$5964°_{3\,1/2} - 28337_{2\,1/2}$	13
4446.764	1	*MB*	22481.952	$2879°_{5\,1/2} - 25361_{4\,1/2}$	−26	4468.629	3	*MB*	22371.950	$10924°_{4\,1/2} - 33296_{4\,1/2}$	21
4447.128	6	*MB*	22480.112			4469.048	1	*WA*	22369.852	$5964°_{3\,1/2} - 28334_{4\,1/2}$	−7
4447.256	1	*MB*	22479.465	$6549°_{2\,1/2} - 29029_{1\,1/2}$	20	4469.124	3	*MB*	22369.472	$16159°_{3\,1/2} - 38529_{2\,1/2}$	−12
4447.466	1	*MB*	22478.404	$5819°_{4\,1/2} - 28297_{3\,1/2}$	44	4469.226	2	*MB*	22368.961	$12057°_{2\,1/2} - 34426_{2\,1/2}$	32
4448.237	3	*MB*	22474.508			4469.508	2	*MB*	22367.550	$7878°_{3\,1/2} - 30245_{4\,1/2}$	0
4448.327	2	*MB*	22474.053			4469.847	3	*MB*	22365.854	$10684°_{0\,1/2} - 33050_{1\,1/2}$	4
4448.934	1	*MB*	22470.986	$11340°_{3\,1/2} - 33811_{4\,1/2}$	18	4470.201	1	*WA*	22364.083	$18147°_{2\,1/2} - 40511_{1\,1/2}$	−38
4449.322	550	*MB*	22469.027	$4910°_{5\,1/2} - 27379_{5\,1/2}$	41	4470.544	1	*MB*	22362.367	$14481°_{2\,1/2} - 36844_{2\,1/2}$	−7
4449.573	5	*MB*	22467.760	$5437°_{3\,1/2} - 27905_{4\,1/2}$	25	4471.237	1000	*MB*	22358.901	$5616_{4\,1/2} - 27975°_{4\,1/2}$	21
4449.631	70	*MB*	22467.467	$8169°_{1\,1/2} - 30637_{2\,1/2}$	8	4471.632	4	*MB*	22356.926	$8774_{4\,1/2} - 31130°_{3\,1/2}$	7
4450.115	2	*MB*	22465.023			4471.779	1	*WA*	22356.191	$8280°_{2\,1/2} - 30637_{2\,1/2}$	−19
4450.250	2	*MB*	22464.342	$8280°_{2\,1/2} - 30745_{1\,1/2}$	2	4472.083	4	*MB*	22354.671	$5942°_{3\,1/2} - 28297_{3\,1/2}$	−3
4450.727	440	*MB*	22461.934	$5513_{5\,1/2} - 27975°_{4\,1/2}$	24	4472.600	10	*MB*	22352.087	$7713°_{4\,1/2} - 30065_{3\,1/2}$	13
4452.072	2	*MB*	22455.148			4472.714	320	*MB*	22351.518	$3593°_{4\,1/2} - 25945_{3\,1/2}$	4

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4473.132	2	*MB*	22349.429	$16192°_{4\,1/2}-38541_{4\,1/2}$	22	4496.254	50	*MB*	22234.499	$8402°_{3\,1/2}-30637_{2\,1/2}$	10
4473.378	2	*MB*	22348.200			4496.549	1	*MB*	22233.040	$14963°_{5\,1/2}-37196_{4\,1/2}$	1
4473.605	4	*MB*	22347.066			4497.120	1	*MB*	22230.217	$1410°_{4\,1/2}-23640_{4\,1/2}$	−41
4473.762	1	*MB*	22346.282	$11949°_{3\,1/2}-34295_{4\,1/2}$	21	4497.295	2	*MB*	22229.352	$5675°_{4\,1/2}-27905_{4\,1/2}$	−41
4474.331	1	*MB*	22343.440			4497.544	2	*MB*	22228.121	$8927°_{5\,1/2}-31155_{6\,1/2}$	13
4474.698	30	*MB*	22341.607	$8789_{2\,1/2}-31130°_{3\,1/2}$	5	4497.847	180	*MB*	22226.624	$7722_{2\,1/2}-29948°_{2\,1/2}$	−4
4474.865	3	*WA*	22340.774	$6389°_{4\,1/2}-28730_{3\,1/2}$	4	4497.992	2	*WA*	22225.908	$10088°_{1\,1/2}-32314_{0\,1/2}$	82
4475.974	2	*WA*	22335.238	$6389°_{4\,1/2}-28725_{4\,1/2}$	33	4498.917	1	*MB*	22221.338	$10641°_{2\,1/2}-32862_{3\,1/2}$	13
4476.497	5	*MB*	22332.629	$5964°_{3\,1/2}-28297_{3\,1/2}$	52	4499.505	5	*MB*	22218.434	$5716°_{3\,1/2}-27934_{4\,1/2}$	12
4476.990	2	*MB*	22330.170	$8702°_{1\,1/2}-31032_{0\,1/2}$	3	4499.753	9	*MB*	22217.210	$9634°_{1\,1/2}-31851_{2\,1/2}$	0
4477.212	4	*MB*	22329.063			4500.333	60	*MB*	22214.346	$9723°_{4\,1/2}-31937_{3\,1/2}$	28
4478.396	1	*WA*	22323.159	$29735°_{4\,1/2}-52058_{4\,1/2}$	−14	4500.487	2	*MB*	22213.586	$13012°_{2\,1/2}-35225_{2\,1/2}$	25
4479.085	3	*MB*	22319.725			4500.809	3	*MB*	22211.997	$11340°_{3\,1/2}-33552_{2\,1/2}$	13
4479.229	10	*MB*	22319.008	$7746°_{2\,1/2}-30065_{3\,1/2}$	29	4501.694	3	*MB*	22207.630	$9723°_{4\,1/2}-31930_{4\,1/2}$	30
4479.358	500	*MB*	22318.365	$4523°_{4\,1/2}-26841_{4\,1/2}$	15	4501.829	4	*MB*	22206.964	$16454_{2\,1/2}-38661°_{1\,1/2}$	0
4479.418	15	*MB*	22318.066	$3363°_{2\,1/2}-25681_{1\,1/2}$	6	4501.996	2	*WA*	22206.141	$11949°_{3\,1/2}-34155_{3\,1/2}$	19
4481.263	1	*MB*	22308.878			4502.568	4	*MB*	22203.320	$10114°_{2\,1/2}-32318_{3\,1/2}$	28
4481.478	4	*MB*	22307.808			4502.833	1	*MB*	22202.013		
4481.906	5	*MB*	22305.677	$7059°_{4\,1/2}-29364_{3\,1/2}$	9	4504.395	3	*MB*	22194.314		
4482.603	3	*MB*	22302.209	$11742°_{5\,1/2}-34044_{4\,1/2}$	13	4504.702	1	*MB*	22192.802		
4482.671	2	*MB*	22301.871	$10314_{4\,1/2}-32616°_{4\,1/2}$	14	4505.486	2	*WA*	22188.940	$5716°_{3\,1/2}-27905_{4\,1/2}$	0
4482.787	3	*MB*	22301.294	$12466°_{1\,1/2}-34767_{1\,1/2}$	33	4505.868	7	*MB*	22187.059	$12326°_{6\,1/2}-34513_{6\,1/2}$	8
4483.054	3	*MB*	22299.965	$8402°_{3\,1/2}-30702_{4\,1/2}$	24	4506.136	3	*MB*	22185.739	$13012°_{2\,1/2}-35197_{1\,1/2}$	−5
4483.350	10	*MB*	22298.493	$10114°_{2\,1/2}-32413_{3\,1/2}$	30	4506.516	2	*WA*	22183.868	$10454°_{1\,1/2}-32638_{1\,1/2}$	−24
4483.891	500	*MB*	22295.803	$6967_{6\,1/2}-29263°_{5\,1/2}$	12	4507.751	8	*MB*	22177.791	$2641°_{3\,1/2}-24819_{3\,1/2}$	16
4484.824	120b	*MB*	22291.165	$9053_{3\,1/2}-31344°_{3\,1/2}$	−33	4508.076	50	*MB*	22176.192	$5010°_{2\,1/2}-27187_{3\,1/2}$	15
4485.280	1	*MB*	22288.898			4508.339	4	*MB*	22174.898	$20554_{5\,1/2}-42729°_{5\,1/2}$	47
4485.512	60	*MB*	22287.745	$7878°_{3\,1/2}-30166_{3\,1/2}$	17	4508.726	10	*MB*	22172.995	$3508°_{0\,1/2}-25681_{1\,1/2}$	−22
4485.872	1	*WA*	22285.957	$10703_{4\,1/2}-32989°_{3\,1/2}$	44	4509.117	25	*MB*	22171.072	$7092_{5\,1/2}-29263°_{5\,1/2}$	0
4486.178	1	*MB*	22284.437			4509.169	20	*MB*	22170.817	$10869_{4\,1/2}-33040°_{4\,1/2}$	5
4486.404	2	*WA*	22283.314	$5651°_{5\,1/2}-27934_{4\,1/2}$	34	4509.254	16	*MB*	22170.399	$7722_{2\,1/2}-29892°_{3\,1/2}$	7
4486.905	600	*MB*	22280.826	$2382°_{4\,1/2}-24663_{4\,1/2}$	18	4509.594	1	*MB*	22168.727	$10820_{2\,1/2}-32989°_{3\,1/2}$	−4
4487.162	4	*MB*	22279.550	$1873°_{3\,1/2}-24153_{3\,1/2}$	18	4509.728	9	*MB*	22168.069	$6517°_{2\,1/2}-28685_{2\,1/2}$	−69
4487.872	1	*MB*	22276.025	$12057°_{2\,1/2}-34333_{2\,1/2}$	35	4510.082	2	*WA*	22166.329	$12762°_{4\,1/2}-34928_{4\,1/2}$	1
4488.809	30	*MB*	22271.375	$8804°_{4\,1/2}-31075_{4\,1/2}$	−3	4510.163	40	*MB*	22165.930	$29892°_{3\,1/2}-52058_{4\,1/2}$	21
										$12260°_{3\,1/2}-34426_{2\,1/2}$	−18
4489.526	6	*MB*	22267.819	$7522°_{0\,1/2}-29790_{0\,1/2}$	7						
4489.817	1	*MB*	22266.375	$13659°_{4\,1/2}-35925_{3\,1/2}$	23	4510.385	1	*MB*	22164.839	$11387°_{3\,1/2}-33552_{2\,1/2}$	−11
4491.307	1	*MB*	22258.989	$8702°_{1\,1/2}-30961_{1\,1/2}$	−84	4510.764	5	*MB*	22162.977	$4737°_{2\,1/2}-26900_{3\,1/2}$	−3
4491.983	1	*MB*	22255.639	$8169°_{1\,1/2}-30425_{2\,1/2}$	−11	4510.915	35	*MB*	22162.235	$8927°_{5\,1/2}-31089_{5\,1/2}$	19
4492.351	1	*MB*	22253.816	$5651°_{5\,1/2}-27905_{4\,1/2}$	16					$7202°_{2\,1/2}-29364_{3\,1/2}$	25
4492.777	9	*MB*	22251.706	$10798°_{2\,1/2}-33050_{1\,1/2}$	−29	4511.638	60	*MB*	22158.684	$9778°_{2\,1/2}-31937_{3\,1/2}$	17
4492.948	30	*MB*	22250.859	$7341_{5\,1/2}-29591°_{6\,1/2}$	−6	4512.169	3	*MB*	22156.076		
4493.222	6	*MB*	22249.502	$8175°_{2\,1/2}-30425_{2\,1/2}$	17	4512.464	2	*WA*	22154.628	$10924°_{4\,1/2}-33079_{3\,1/2}$	−7
4493.555	2	*WA*	22247.853	$7746°_{2\,1/2}-29994_{2\,1/2}$	−2	4512.843	1	*MB*	22152.767		
4493.678	4	*MB*	22247.245	$7202°_{2\,1/2}-29449_{1\,1/2}$	−3	4513.669	2	*WA*	22148.713	$11759_{5\,1/2}-33908°_{4\,1/2}$	−12
4494.219	100	*MB*	22244.566	$6389°_{4\,1/2}-28634_{5\,1/2}$	−7	4513.807	2	*WA*	22148.036	$8927°_{5\,1/2}-31075_{4\,1/2}$	−52
4494.807	1	*MB*	22241.656	$10869_{4\,1/2}-33111°_{3\,1/2}$	35	4514.450	5	*MB*	22144.882	$7293°_{6\,1/2}-29438_{5\,1/2}$	3
4495.384	90	*MB*	22238.802	$5010°_{2\,1/2}-27249_{2\,1/2}$	3	4514.548	1	*MB*	22144.401	$8280°_{2\,1/2}-30425_{2\,1/2}$	−1
4495.528	5	*MB*	22238.089	$2581°_{4\,1/2}-24819_{3\,1/2}$	13	4514.687	5	*MB*	22143.719		
4496.212	50	*MB*	22234.707	$8789_{2\,1/2}-31024°_{2\,1/2}$	11	4515.284	2	*MB*	22140.791	$11007°_{1\,1/2}-33148_{2\,1/2}$	2

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4515.850	80	*MB*	22138.016	$8531_{3\,1/2}$ $-30669°_{4\,1/2}$	−7	4539.419	2	*MB*	22023.076	$15565°_{2\,1/2}-37588_{3\,1/2}$	23
4516.290	10	*MB*	22135.860	$6549°_{2\,1/2}-28685_{2\,1/2}$	10	4539.584	7	*MB*	22022.276	$7259°_{3\,1/2}-29281_{2\,1/2}$	−22
4516.910	4	*MB*	22132.821			4539.745	600	*MB*	22021.495	$2641°_{3\,1/2}-24663_{4\,1/2}$	0
4517.120	1	*MB*	22131.792	$5819°_{4\,1/2}-27950_{5\,1/2}$	15	4541.054	1	*MB*	22015.147	$9723°_{4\,1/2}-31738_{5\,1/2}$	−1
4517.297	3	*MB*	22130.925	$5118°_{2\,1/2}-27249_{2\,1/2}$	62	4542.904	3	*MB*	22006.182	$10820_{2\,1/2}$ $-32826°_{1\,1/2}$	0
4518.725	4	*MB*	22123.932			4543.674	3	*MB*	22002.452	$7278°_{1\,1/2}-29281_{2\,1/2}$	1
4519.104	3	*MB*	22122.076			4544.953	150	*MB*	21996.261	$3363°_{2\,1/2}-25359_{2\,1/2}$	2
4519.119	2	*MB*	22122.003							$6638°_{4\,1/2}-28634_{5\,1/2}$	3
4519.264	5	*MB*	22121.293			4545.870	25	*MB*	21991.824	$5942°_{3\,1/2}-27934_{4\,1/2}$	−15
4519.594	70	*MB*	22119.678	$10869_{4\,1/2}$ $-32989°_{3\,1/2}$	1	4546.835	3	*MB*	21987.156	$9778°_{2\,1/2}-31766_{1\,1/2}$	34
4520.400	5	*MB*	22115.734	$7878°_{3\,1/2}-29994_{2\,1/2}$	21	4549.383	5	*MB*	21974.842	$16159°_{3\,1/2}-38134_{4\,1/2}$	−21
4520.994	8	*MB*	22112.828	$19920°_{3\,1/2}-42033_{2\,1/2}$	−13	4549.629	50	*MB*	21973.654	$11015_{3\,1/2}$ $-32989°_{3\,1/2}$	15
4521.787	1	*MB*	22108.950	$12057°_{2\,1/2}-34166_{1\,1/2}$	18	4549.817	2	*MB*	21972.746	$14315°_{0\,1/2}-36288_{0\,1/2}$	19
4522.078	16	*MB*	22107.527	$7059°_{4\,1/2}-29166_{4\,1/2}$	3	4549.942	3	*MB*	21972.142	$7818°_{1\,1/2}-29790_{0\,1/2}$	20
4522.460	5	*MB*	22105.660	$7259°_{3\,1/2}-29364_{3\,1/2}$	−4	4550.293	50	*MB*	21970.448	$9053_{3\,1/2}$ $-31024°_{2\,1/2}$	1
4523.077	550	*MB*	22102.645	$4165_{4\,1/2}$ $-26268°_{3\,1/2}$	−7	4551.292	180	*MB*	21965.625	$5969°_{5\,1/2}-27934_{4\,1/2}$	−5
4523.782	4	*MB*	22099.200			4551.714	2	*MB*	21963.589		
4523.941	1	*WA*	22098.424	$13527_{4\,1/2}$ $-35625°_{3\,1/2}$	−36	4552.539	3	*MB*	21959.609	$12466°_{1\,1/2}-34426_{2\,1/2}$	2
4524.587	5	*MB*	22095.269	$11949°_{3\,1/2}-34044_{4\,1/2}$	17	4553.757	3	*MB*	21953.735	$10684°_{0\,1/2}-32638_{1\,1/2}$	11
				$5716°_{3\,1/2}-27811_{3\,1/2}$	−10	4554.545	20	*MB*	21949.937	$3995°_{3\,1/2}-25945_{3\,1/2}$	1
4524.852	4	*MB*	22093.974	$7713°_{4\,1/2}-29807_{3\,1/2}$	−14	4554.698	2	*MB*	21949.199	$19136°_{2\,1/2}-41085_{3\,1/2}$	10
4525.758	1	*MB*	22089.552			4554.735	4	*MB*	21949.021		
4526.003	3	*MB*	22088.356			4555.429	50	*MB*	21945.677	$20783_{5\,1/2}$ $-42729°_{5\,1/2}$	23
4526.349	5	*MB*	22086.667	$15565°_{2\,1/2}-37652_{2\,1/2}$	−3	4555.609	5	*MB*	21944.810	$6389°_{4\,1/2}-28334_{4\,1/2}$	−3
4526.861	4	*MB*	22084.169	$11325°_{2\,1/2}-33409_{3\,1/2}$	54	4556.208	18	*MB*	21941.925	$16192°_{4\,1/2}-38134_{4\,1/2}$	−8
4527.349	600	*MB*	22081.789	$2581°_{4\,1/2}-24663_{4\,1/2}$	−8	4557.039	5	*MB*	21937.924	$10924°_{4\,1/2}-32862_{3\,1/2}$	33
4527.424	10	*MB*	22081.423	$7713°_{4\,1/2}-29794_{3\,1/2}$	−4	4557.404	5	*MB*	21936.167	$5969°_{5\,1/2}-27905_{4\,1/2}$	17
4527.957	5	*MB*	22078.824	$7202°_{2\,1/2}-29281_{2\,1/2}$	−20	4558.067	3	*MB*	21932.976	$7233°_{5\,1/2}-29166_{4\,1/2}$	7
4528.472	600	*MB*	22076.313	$6967_{6\,1/2}$ $-29043°_{6\,1/2}$	6	4558.600	50	*MB*	21930.412	$4910°_{5\,1/2}-26841_{4\,1/2}$	−8
4528.696	3	*MB*	22075.221	$10641°_{2\,1/2}-32716_{2\,1/2}$	16	4558.903	8	*MB*	21928.954	$20783_{5\,1/2}$ $-42712°_{6\,1/2}$	−63
4529.150	1	*MB*	22073.008	$12260°_{3\,1/2}-34333_{2\,1/2}$	−1	4559.239	1	*MB*	21927.338	$7522°_{0\,1/2}-29449_{1\,1/2}$	19
4529.272	4	*MB*	22072.414	$9778°_{2\,1/2}-31851_{2\,1/2}$	3	4560.283	460	*MB*	21922.319	$7341_{5\,1/2}$ $-29263°_{5\,1/2}$	−11
4529.910	6	*MB*	22069.305	$11742°_{5\,1/2}-33811_{4\,1/2}$	−16	4560.543	5	*MB*	21921.069	$10314_{4\,1/2}$ $-32235°_{3\,1/2}$	−7
				$11340°_{3\,1/2}-33409_{3\,1/2}$	7	4560.959	220	*MB*	21919.070	$5513_{5\,1/2}$ $-27432°_{4\,1/2}$	−2
4530.080	2	*MB*	22068.477	$25361_{4\,1/2}$ $-47430°_{3\,1/2}$	−32	4561.264	5	*MB*	21917.604		
4530.127	1	*WA*	22068.248	$5118°_{2\,1/2}-27187_{3\,1/2}$	7	4561.558	4	*MB*	21916.191	$7522°_{5\,1/2}-29438_{5\,1/2}$	−4
4530.827	20	*MB*	22064.839	$10820_{2\,1/2}$ $-32885°_{2\,1/2}$	−41					$7878°_{3\,1/2}-29794_{3\,1/2}$	3
4531.634	5	*MB*	22060.909	$7746°_{2\,1/2}-29807_{3\,1/2}$	17	4562.358	1500	*MB*	21912.348	$3854_{3\,1/2}$ $-25766°_{4\,1/2}$	6
4532.486	80	*MB*	22056.762	$13659°_{4\,1/2}-35716_{5\,1/2}$	9	4563.039	5	*MB*	21909.078	$11387°_{3\,1/2}-33296_{4\,1/2}$	4
4532.798	1	*WA*	22055.244	$5651°_{5\,1/2}-27706_{6\,1/2}$	−29					$1873°_{3\,1/2}-23782_{2\,1/2}$	21
4533.227	3	*MB*	22053.157	$10454°_{1\,1/2}-32507_{1\,1/2}$	−12	4563.360	20	*MB*	21907.537	$7259°_{3\,1/2}-29166_{4\,1/2}$	15
4533.862	2	*MB*	22050.068	$10088°_{1\,1/2}-32138_{2\,1/2}$	11					$6389°_{4\,1/2}-28297_{3\,1/2}$	6
4534.216	20	*MB*	22048.347	$7746°_{2\,1/2}-29794_{3\,1/2}$	15	4563.863	5	*MB*	21905.123	$2595°_{1\,1/2}-24500_{2\,1/2}$	11
4535.355	2	*WA*	22042.810	$8702°_{1\,1/2}-30745_{1\,1/2}$	−31	4564.758	5	*MB*	21900.828	$9269°_{0\,1/2}-31170_{1\,1/2}$	9
4536.642	6	*MB*	22036.557	$9198°_{3\,1/2}-31234_{2\,1/2}$	4	4565.051	3	*MB*	21899.422	$13659°_{4\,1/2}-35558_{3\,1/2}$	50
4536.887	60	*MB*	22035.367	$12260°_{3\,1/2}-34295_{4\,1/2}$	5	4565.841	300	*MB*	21895.633	$8774_{4\,1/2}$ $-30669°_{4\,1/2}$	−4
4537.871	50	*MB*	22030.589	$7878°_{3\,1/2}-29908_{4\,1/2}$	13	4566.199	2	*MB*	21893.916		
4538.422	10	*MB*	22027.914	$9316_{3\,1/2}$ $-31344°_{3\,1/2}$	−1	4567.161	5	*MB*	21889.305	$8175°_{2\,1/2}-30065_{3\,1/2}$	4
4539.070	80	*MB*	22024.769	$11015_{3\,1/2}$ $-33040°_{4\,1/2}$	−4	4567.391	8	*MB*	21888.203	$5924°_{1\,1/2}-27812_{2\,1/2}$	9
4539.276	9	*MB*	22023.770	$10114°_{2\,1/2}-32138_{2\,1/2}$	−44	4568.029	1	*MB*	21885.146	$8280°_{2\,1/2}-30166_{3\,1/2}$	35

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4569.665	30	*MB*	21877.311	$9198°_{3\,1/2}-31075_{4\,1/2}$	34	4590.154	4	*MB*	21779.659	$9778°_{2\,1/2}-31558_{3\,1/2}$	19
				$10924°_{4\,1/2}-32802_{5\,1/2}$	22	4590.485	1	*MB*	21778.088	$16192°_{4\,1/2}-37970_{5\,1/2}$	23
4570.398	2	*MB*	21873.802			4590.729	1	*MB*	21776.931	$15565°_{2\,1/2}-37342_{2\,1/2}$	24
4571.066	1	*MB*	21870.606			4591.115	90	*MB*	21775.100	$8927°_{5\,1/2}-30702_{4\,1/2}$	4
4571.467	6	*MB*	21868.687	$5942°_{3\,1/2}-27811_{3\,1/2}$	−10	4591.566	3	*MB*	21772.961	$8896_{5\,1/2}-30669°_{4\,1/2}$	−11
4572.011	7	*MB*	21866.085	$2634°_{2\,1/2}-24500_{2\,1/2}$	−4	4591.932	2	*MB*	21771.226	$2382°_{4\,1/2}-24153_{3\,1/2}$	6
4572.281	750	*MB*	21864.794	$5513_{5\,1/2}-27378°_{5\,1/2}$	−11	4592.901	5	*MB*	21766.633	$1873°_{3\,1/2}-23640_{4\,1/2}$	4
4572.783	60	*MB*	21862.393	$11949°_{3\,1/2}-33811_{4\,1/2}$	16	4593.348	1	*MB*	21764.514		
4572.996	4	*MB*	21861.375	$13436_{2\,1/2}-35298°_{2\,1/2}$	40	4593.417	3	*MB*	21764.187		
4573.208	2	*MB*	21860.362			4593.716	7	*MB*	21762.771	$9269°_{0\,1/2}-31032_{0\,1/2}$	−13
										$10088°_{1\,1/2}-31851_{2\,1/2}$	14
4573.264	2	*MB*	21860.094								
4573.467	2	*WA*	21859.124	$11949°_{3\,1/2}-33808_{2\,1/2}$	−3	4593.924	600	*MB*	21761.785	$5616_{4\,1/2}-27378°_{5\,1/2}$	10
4573.917	1	*MB*	21856.973	$1410°_{4\,1/2}-23267_{3\,1/2}$	−73	4595.227	1	*MB*	21755.615	$13012°_{2\,1/2}-34767_{1\,1/2}$	19
4574.843	1	*MB*	21852.549	$11007°_{1\,1/2}-32860_{0\,1/2}$	−4	4596.151	2	*MB*	21751.241	$12057°_{2\,1/2}-33808_{2\,1/2}$	32
4575.483	2	*MB*	21849.493			4596.310	1	*MB*	21750.489	$7278°_{1\,1/2}-29029_{1\,1/2}$	58
4575.744	1	*MB*	21848.246			4596.927	5	*MB*	21747.570	$6549°_{2\,1/2}-28297_{3\,1/2}$	5
4576.083	1	*MB*	21846.628	$5964°_{3\,1/2}-27811_{3\,1/2}$	28	4597.158	40	*MB*	21746.477	$10869_{4\,1/2}-32616°_{4\,1/2}$	0
4576.470	40	*MB*	21844.781	$9198°_{3\,1/2}-31043_{2\,1/2}$	−2	4598.036	1	*MB*	21742.324		
4576.802	3	*MB*	21843.196	$8402°_{3\,1/2}-30245_{4\,1/2}$	−13	4598.754	1	*MB*	21738.930	$11340°_{3\,1/2}-33079_{3\,1/2}$	16
4577.558	2	*MB*	21839.589	$10798°_{2\,1/2}-32638_{1\,1/2}$	−20	4599.026	16	*MB*	21737.644	$5969°_{5\,1/2}-27706_{6\,1/2}$	20
4577.701	1	*MB*	21838.906	$5675°_{4\,1/2}-27514_{3\,1/2}$	10	4599.591	6	*MB*	21734.974	$9634°_{1\,1/2}-31369_{2\,1/2}$	67
4578.463	4	*MB*	21835.272	$9723°_{4\,1/2}-31558_{3\,1/2}$	−18	4600.619	1	*MB*	21730.117		
4578.779	50	*MB*	21833.765	$13027_{6\,1/2}-34861°_{5\,1/2}$	−2	4600.720	1	*MB*	21729.641		
4579.159	2	*MB*	21831.953			4601.375	25	*MB*	21726.547	$10646_{5\,1/2}-32372°_{4\,1/2}$	−3
4579.212	2	*MB*	21831.700			4601.551	2	*MB*	21725.716	$7713°_{4\,1/2}-29438_{5\,1/2}$	−11
4579.258	60	*MB*	21831.481	$20881_{6\,1/2}-42712°_{6\,1/2}$	6	4601.823	4	*MB*	21724.432	$11325°_{2\,1/2}-33050_{1\,1/2}$	−77
4580.772	1	*MB*	21824.266	$8169°_{1\,1/2}-29994_{2\,1/2}$	−76	4602.150	2	*WA*	21722.888	$8702°_{1\,1/2}-30425_{2\,1/2}$	−16
4580.985	6	*MB*	21823.251			4602.518	5	*MB*	21721.152	$6913°_{6\,1/2}-28634_{5\,1/2}$	28
4581.335	3	*MB*	21821.583			4603.188	1	*MB*	21717.990		
4581.513	1	*MB*	21820.736			4603.384	3	*MB*	21717.066	$12260°_{3\,1/2}-33977_{3\,1/2}$	14
4582.050	2	*MB*	21818.179	$8175°_{2\,1/2}-29994_{2\,1/2}$	1	4603.578	2	*MB*	21716.150		
4582.409	10	*MB*	21816.469	$6521°_{1\,1/2}-28337_{2\,1/2}$	−12	4604.220	16	*MB*	21713.122	$8280°_{2\,1/2}-29994_{2\,1/2}$	28
4582.500	300	*MB*	21816.036	$5616_{4\,1/2}-27432°_{4\,1/2}$	−6	4605.108	1	*WA*	21708.936	$10798°_{2\,1/2}-32507_{1\,1/2}$	49
4583.381	1	*MB*	21811.843			4605.483	25	*MB*	21707.168	$9316_{3\,1/2}-31024°_{2\,1/2}$	4
4584.144	1	*MB*	21808.212	$8175°_{2\,1/2}-29984_{1\,1/2}$	24	4606.116	1	*MB*	21704.185	$5675°_{4\,1/2}-27379_{5\,1/2}$	0
4584.189	2	*MB*	21807.998	$11340°_{3\,1/2}-33148_{2\,1/2}$	8	4606.244	1	*MB*	21703.582	$7746°_{2\,1/2}-29449_{1\,1/2}$	−10
4584.383	1	*MB*	21807.075	$5010°_{2\,1/2}-26817_{2\,1/2}$	10	4606.399	300	*MB*	21702.851	$7341_{5\,1/2}-29043°_{6\,1/2}$	5
4585.183	2	*MB*	21803.271			4607.083	5	*MB*	21699.629	$12466°_{1\,1/2}-34166_{1\,1/2}$	21
4585.506	1	*MB*	21801.735	$19946°_{1\,1/2}-41748_{1\,1/2}$	24	4607.286	2	*MB*	21698.673	$13758°_{1\,1/2}-35457_{1\,1/2}$	25
4585.585	1	*MB*	21801.359			4607.745	4	*MB*	21696.512	$6638°_{4\,1/2}-28334_{4\,1/2}$	14
4586.212	4	*MB*	21798.379	$5716°_{3\,1/2}-27514_{3\,1/2}$	−64	4607.948	3	*MB*	21695.556	$5819°_{4\,1/2}-27514_{3\,1/2}$	9
4586.396	1	*MB*	21797.504			4608.747	6	*MB*	21691.795	$11387°_{3\,1/2}-33079_{3\,1/2}$	14
4586.688	2	*MB*	21796.117			4610.316	4	*MB*	21684.413	$10454°_{1\,1/2}-32138_{2\,1/2}$	−12
4586.828	1	*MB*	21795.451	$7878°_{3\,1/2}-29673_{2\,1/2}$	10	4611.543	60	*MB*	21678.643	$12365°_{4\,1/2}-34044_{4\,1/2}$	8
4587.097	1	*MB*	21794.173			4611.789	1	*MB*	21677.487	$10088°_{1\,1/2}-31766_{1\,1/2}$	18
4587.585	1	*MB*	21791.855			4611.950	3	*MB*	21676.730	$10641°_{2\,1/2}-32318_{3\,1/2}$	−2
4587.704	1	*MB*	21791.290			4613.008	50	*MB*	21671.758	$8448_{2\,1/2}-30120°_{1\,1/2}$	−6
4588.414	5	*MB*	21787.918	$6549°_{2\,1/2}-28337_{2\,1/2}$	12	4613.530	2	*MB*	21669.307	$10703_{4\,1/2}-32372°_{4\,1/2}$	−8
4589.164	5	*MB*	21784.357	$12260°_{3\,1/2}-34044_{4\,1/2}$	4	4614.018	2	*WA*	21667.015	$15565°_{2\,1/2}-37232_{1\,1/2}$	−2
4589.373	5	*MB*	21783.365	$2879°_{5\,1/2}-24663_{4\,1/2}$	5	4614.220	4	*MB*	21666.066	$7059°_{4\,1/2}-28725_{4\,1/2}$	−9

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
4614.939	1	*MB*	21662.691	$10274°_{3/2}-31937_{3/2}$	9	4641.865	1	*MB*	21537.034	$11325°_{2/2}-32862_{3/2}$	48
4614.962	2	*WA*	21662.583	$8402°_{3/2}-30065_{3/2}$	87	4641.986	1	*WA*	21536.473	$9634°_{1/2}-31170_{1/2}$	14
4615.688	2	*WA*	21659.175	$6638°_{4/2}-28297_{3/2}$	−39	4642.262	3	*MB*	21535.192	$7746°_{2/2}-29281_{2/2}$	3
4615.920	1	*MB*	21658.087	$3703°_{3/2}-25361_{4/2}$	7	4642.639	1	*MB*	21533.444	$5716°_{3/2}-27249_{2/2}$	−8
4616.078	6	*MB*	21657.346	$11387°_{3/2}-33045_{2/2}$	−17	4642.756	1	*MB*	21532.901	$12762°_{4/2}-34295_{4/2}$	92
4616.363	2	*WA*	21656.009	$10274°_{3/2}-31930_{4/2}$	44	4642.892	1	*WA*	21532.270	$10035°_{5/2}-31568_{4/2}$	−37
4616.437	1	*MB*	21655.661	$14481°_{2/2}-36137_{2/2}$	−12	4642.969	2	*WA*	21531.913	$10703_{4/2}-32235°_{3/2}$	−20
4616.643	3	*MB*	21654.695			4643.775	4	*MB*	21528.176	$7202°_{2/2}-28730_{3/2}$	−6
4617.378	2	*WA*	21651.248	$10114°_{2/2}-31766_{1/2}$	22	4644.211	50	*MB*	21526.155	$8280°_{2/2}-29807_{3/2}$	23
4618.306	1	*MB*				4645.619	3	*MB*	21519.631	$22903_{1/2}-44423°_{1/2}$	30
										$10798°_{2/2}-32318_{3/2}$	11
4618.930	5	*MB*	21643.973	$7522°_{5/2}-29166_{4/2}$	−2						
4619.195	3	*MB*	21642.732			4645.801	4	*MB*	21518.788	$2634°_{2/2}-24153_{3/2}$	−11
4619.279	1	*MB*	21642.338			4646.166	1	*MB*	21517.097	$12057°_{2/2}-33574_{1/2}$	60
4621.742	2	*MB*	21630.805	$9198°_{3/2}-30829_{3/2}$	7	4646.571	1	*WA*	21515.222	$6389°_{4/2}-27905_{4/2}$	7
4621.903	1	*WA*	21630.051	$10684°_{0/2}-32314_{0/2}$	23	4647.285	30	*MB*	21511.917	$2641°_{3/2}-24153_{3/2}$	10
4623.478	5	*MB*	21622.683	$4322°_{2/2}-25945_{3/2}$	−4	4647.422	30	*MB*	21511.282	$5675°_{4/2}-27187_{3/2}$	−1
4624.360	4	*MB*	21618.559	$7746°_{2/2}-29364_{3/2}$	4	4648.290	2	*WA*	21507.266	$4844°_{1/2}-26351_{0/2}$	0
4624.895	300	*MB*	21616.058	$9053_{3/2}-30669°_{4/2}$	−14	4648.369	1	*MB*	21506.900	$7522°_{0/2}-29029_{1/2}$	5
4625.291	3	*MB*	21614.207	$3745°_{1/2}-25359_{2/2}$	−3	4648.510	2	*MB*	21506.248	$8402°_{3/2}-29908_{4/2}$	12
4625.656	1	*MB*	21612.502			4648.937	1	*WA*	21504.272	$9198°_{3/2}-30702_{4/2}$	−11
4625.827	1	*MB*	21611.703			4649.797	1	*MB*	21500.295	$8448_{2/2}-29948°_{2/2}$	22
4627.435	5	*MB*	21604.193	$8131_{4/2}-29735°_{4/2}$	−2	4650.834	1	*MB*	21495.501	$12057°_{2/2}-33552_{2/2}$	27
4628.157	1200	*MB*	21600.823	$4165_{4/2}-25766°_{4/2}$	18	4651.470	2	*WA*	21492.562	$16159°_{3/2}-37652_{2/2}$	8
4628.240	8	*MB*	21600.436	$11015_{3/2}-32616°_{4/2}$	−3	4651.631	5	*MB*	21491.818		
4628.828	2	*MB*	21597.692			4651.683	6	*MB*	21491.578	$7233°_{5/2}-28725_{4/2}$	57
4629.358	1	*MB*	21595.219			4651.880	1	*MB*	21490.668		
4629.965	3	*MB*	21592.388			4652.110	2	*MB*	21489.605		
4630.184	2	*WA*	21591.367	$8402°_{3/2}-29994_{2/2}$	−5	4652.355	1	*MB*	21488.474	$10924°_{4/2}-32413_{3/2}$	4
4630.380	2	*MB*	21590.453			4652.990	1	*MB*	21485.541	$4459°_{3/2}-25945_{3/2}$	18
4630.438	2	*MB*	21590.182	$9778°_{2/2}-31369_{2/2}$	76	4653.500	1	*MB*	21483.187	$7202°_{2/2}-28685_{2/2}$	−41
4630.816	30	*WA*	21588.420			4654.278	90	*MB*	21479.595	$4201°_{1/2}-25681_{1/2}$	1
4631.541	1	*MB*	21585.041			4655.819	4	*MB*	21472.486	$8278_{5/2}-29750°_{5/2}$	−6
4632.195	2	*MB*	21581.993	$11458_{5/2}-33040°_{4/2}$	−6	4656.004	8	*MB*	21471.633	$7259°_{3/2}-28730_{3/2}$	−3
4633.606	25	*MB*	21575.421	$7059°_{4/2}-28634_{5/2}$	−22	4656.179	5	*MB*	21470.826	$5716°_{3/2}-27187_{3/2}$	−4
4634.372	1	*WA*	21571.855	$5942°_{3/2}-27514_{3/2}$	−6	4656.343	1	*WA*	21470.070	$9491°_{0/2}-30961_{1/2}$	45
4635.108	1	*MB*	21568.430	$9771_{7/2}-31340°_{6/2}$	−6	4657.007	6	*MB*	21467.009	$13758°_{1/2}-35225_{2/2}$	23
4635.379	2	*WA*	21567.169	$10924°_{4/2}-32492_{5/2}$	8	4657.210	5	*MB*	21466.073	$7259°_{3/2}-28725_{4/2}$	0
4636.450	3	*MB*	21562.187			4657.827	5	*MB*	21463.230	$7818°_{1/2}-29281_{2/2}$	3
4636.740	30	*MB*	21560.839	$5819°_{4/2}-27379_{5/2}$	3	4658.371	3	*MB*	21460.723	$11949°_{3/2}-33409_{3/2}$	16
4638.091	2	*MB*	21554.558	$11742°_{5/2}-33296_{4/2}$	−1	4659.105	1	*MB*	21457.342	$8278_{5/2}-29735°_{4/2}$	−16
4638.595	1	*MB*	21552.217			4659.415	40	*MB*	21455.915	$9778°_{2/2}-31234_{2/2}$	22
4638.749	4	*MB*	21551.501	$12260°_{3/2}-33811_{4/2}$	22					$3363°_{2/2}-24819_{3/2}$	8
4639.166	5	*MB*	21549.564	$4203°_{6/2}-25753_{6/2}$	5	4659.936	25	*MB*	21453.516	$7713°_{4/2}-29166_{4/2}$	8
4639.326	1	*MB*	21548.821			4660.570	2	*MB*	21450.597		
4639.781	5	*MB*	21546.708			4660.915	2	*MB*	21449.010		
4640.219	3	*MB*	21544.674	$6389°_{4/2}-27934_{4/2}$	−21	4661.622	3	*MB*	21445.757	$12365°_{4/2}-33811_{4/2}$	−3
4640.436	3	*MB*	21543.666	$12751°_{5/2}-34295_{4/2}$	−1	4662.056	1	*MB*	21443.760	$14481°_{2/2}-35925_{3/2}$	9
4640.985	2	*MB*	21541.118	$9491°_{0/2}-31032_{0/2}$	0					$10114°_{2/2}-31558_{3/2}$	18
4641.368	1	*MB*	21539.340			4662.502	2	*WA*	21441.709	$8804°_{4/2}-30245_{4/2}$	55
4641.754	4	*MB*	21537.549			4662.577	1	*MB*	21441.364		

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4662.917	1	*MB*	21439.801			4687.277	1	*MB*	21328.379	$15565°_{2\frac{1}{2}} - 36893_{3\frac{1}{2}}$	29
4663.070	9	*MB*	21439.097	$13758°_{1\frac{1}{2}} - 35197_{1\frac{1}{2}}$	−72	4687.614	5	*MB*	21326.846	$8423_{6\frac{1}{2}} - 29750°_{5\frac{1}{2}}$	−28
4663.232	30	*MB*	21438.353	$12097_{3\frac{1}{2}} - 33535°_{3\frac{1}{2}}$	−6	4687.907	1	*WA*	21325.513	$5924°_{1\frac{1}{2}} - 27249_{2\frac{1}{2}}$	48
4664.143	2	*MB*	21434.165	$4511°_{2\frac{1}{2}} - 25945_{3\frac{1}{2}}$	27	4689.478	16	*MB*	21318.369	$8927°_{5\frac{1}{2}} - 30245_{4\frac{1}{2}}$	5
4665.276	25	*MB*	21428.960	$16159°_{3\frac{1}{2}} - 37588_{3\frac{1}{2}}$	23	4689.760	3	*MB*	21317.087	$27950_{5\frac{1}{2}} - 49267°_{4\frac{1}{2}}$	−5
				$9778°_{2\frac{1}{2}} - 31207_{3\frac{1}{2}}$	19						
						4689.873	1	*MB*	21316.573		
4665.795	2	*MB*				4690.160	20	*MB*	21315.269	$7011_{4\frac{1}{2}} - 28327°_{5\frac{1}{2}}$	2
4666.215	2	*MB*	21424.648			4690.480	25	*MB*	21313.815	$8278_{5\frac{1}{2}} - 29591°_{6\frac{1}{2}}$	−3
4666.710	25	*MB*	21422.375	$4523°_{4\frac{1}{2}} - 25945_{3\frac{1}{2}}$	12	4692.008	40	*MB*	21306.874	$5942°_{3\frac{1}{2}} - 27249_{2\frac{1}{2}}$	3
4666.890	2	*MB*	21421.549	$6389°_{4\frac{1}{2}} - 27811_{3\frac{1}{2}}$	−4	4692.976	1	*MB*	21302.479		
4668.549	1	*MB*	21413.937	$13012°_{2\frac{1}{2}} - 34426_{2\frac{1}{2}}$	−4	4693.897	2	*WA*	21298.299	$9725_{3\frac{1}{2}} - 31024°_{2\frac{1}{2}}$	−43
4668.745	2	*MB*	21413.038	$13784°_{1\frac{1}{2}} - 35197_{1\frac{1}{2}}$	32	4693.992	3	*MB*	21297.868		
4668.940	1	*MB*	21412.144			4694.325	4	*MB*	21296.357	$6638°_{4\frac{1}{2}} - 27934_{4\frac{1}{2}}$	−22
4669.225	1	*MB*	21410.837			4694.870	60	*MB*	21293.885	$6517°_{2\frac{1}{2}} - 27811_{3\frac{1}{2}}$	8
4669.499	80	*MB*	21409.580	$11454_{6\frac{1}{2}} - 32864°_{5\frac{1}{2}}$	3	4695.056	3	*MB*	21293.042	$10274°_{3\frac{1}{2}} - 31568_{4\frac{1}{2}}$	−5
4670.096	6	*MB*	21406.843	$7278°_{1\frac{1}{2}} - 28685_{2\frac{1}{2}}$	8	4695.139	2	*MB*	21292.665	$12751°_{5\frac{1}{2}} - 34044_{4\frac{1}{2}}$	6
4670.300	1	*WA*	21405.909	$11458_{5\frac{1}{2}} - 32864°_{5\frac{1}{2}}$	−15	4695.374	3	*MB*	21291.599	$8702°_{1\frac{1}{2}} - 29994_{2\frac{1}{2}}$	3
4670.445	2	*WA*	21405.244	$9725_{3\frac{1}{2}} - 31130°_{3\frac{1}{2}}$	−5	4695.497	3	*MB*	21291.042	$6521°_{1\frac{1}{2}} - 27812_{2\frac{1}{2}}$	−23
4670.514	6	*MB*	21404.928	$13515°_{3\frac{1}{2}} - 34920_{3\frac{1}{2}}$	−6	4695.924	1	*MB*	21289.106		
4670.725	60	*MB*	21403.961	$5437°_{3\frac{1}{2}} - 26841_{4\frac{1}{2}}$	0	4696.178	4	*MB*	21287.954		
4671.400	5	*MB*	21400.868	$7233°_{5\frac{1}{2}} - 28634_{5\frac{1}{2}}$	−20	4696.758	5	*MB*	21285.326	$6549°_{2\frac{1}{2}} - 27835_{1\frac{1}{2}}$	1
4671.928	1	*MB*	21398.449	$9634°_{1\frac{1}{2}} - 31032_{0\frac{1}{2}}$	25	4697.127	1	*MB*	21283.653	$10274°_{3\frac{1}{2}} - 31558_{3\frac{1}{2}}$	−1
4672.216	2	*MB*	21397.130	$10454°_{1\frac{1}{2}} - 31851_{2\frac{1}{2}}$	6	4697.220	2	*MB*	21283.232	$7746°_{2\frac{1}{2}} - 29029_{1\frac{1}{2}}$	64
4673.074	1	*MB*	21393.202	$10924°_{4\frac{1}{2}} - 32318_{3\frac{1}{2}}$	−96	4697.467	1	*MB*	21282.113	$10058_{6\frac{1}{2}} - 31340°_{6\frac{1}{2}}$	−53
4673.412	2	*WA*	21391.655	$9778°_{2\frac{1}{2}} - 31170_{1\frac{1}{2}}$	−3	4697.538	1	*MB*	21281.791	$12762°_{4\frac{1}{2}} - 34044_{4\frac{1}{2}}$	−8
4673.580	1	*MB*	21390.886	$11325°_{2\frac{1}{2}} - 32716_{2\frac{1}{2}}$	20	4697.742	4	*MB*	21280.867	$11759_{5\frac{1}{2}} - 33040°_{4\frac{1}{2}}$	−18
4674.888	6	*MB*	21384.901			4698.188	3	*MB*	21278.847	$15565°_{2\frac{1}{2}} - 36844_{2\frac{1}{2}}$	−37
4675.180	4	*MB*				4698.500	1	*MB*	21277.434	$19920°_{3\frac{1}{2}} - 41198_{2\frac{1}{2}}$	−61
4676.954	4	*MB*	21375.454			4698.682	1	*MB*			
4677.355	1	*WA*	21373.622	$0°_{3\frac{1}{2}} - 21373_{1\frac{1}{2}}$	0	4698.724	1	*MB*	21276.420		
4678.007	2	*WA*	21370.643	$17171°_{5\frac{1}{2}} - 38541_{4\frac{1}{2}}$	15	4698.886	3	*MB*	21275.686	$7059°_{4\frac{1}{2}} - 28334_{4\frac{1}{2}}$	2
4678.599	6	*MB*	21367.939	$5819°_{4\frac{1}{2}} - 27187_{3\frac{1}{2}}$	5	4699.286	3	*MB*	21273.875	$8175°_{2\frac{1}{2}} - 29449_{1\frac{1}{2}}$	−39
4678.932	3	*MB*	21366.418	$9723°_{4\frac{1}{2}} - 31089_{5\frac{1}{2}}$	22	4700.867	2	*MB*	21266.720		
4679.089	4	*MB*	21365.701	$10869_{4\frac{1}{2}} - 32235°_{3\frac{1}{2}}$	3	4701.434	60	*MB*	21264.156	$9778°_{2\frac{1}{2}} - 31043_{2\frac{1}{2}}$	32
4679.409	4	*MB*	21364.240	$3995°_{3\frac{1}{2}} - 25359_{2\frac{1}{2}}$	14	4701.998	60	*MB*	21261.605	$6549°_{2\frac{1}{2}} - 27811_{3\frac{1}{2}}$	17
4679.935	2	*MB*	21361.839	$8804°_{4\frac{1}{2}} - 30166_{3\frac{1}{2}}$	6	4702.140	1	*MB*	21260.963	$8804°_{4\frac{1}{2}} - 30065_{3\frac{1}{2}}$	23
4680.120	130	*MB*	21360.995	$8531_{3\frac{1}{2}} - 29892°_{3\frac{1}{2}}$	−3	4702.471	3	*MB*			
4680.439	7	*MB*	21359.539	$6967_{6\frac{1}{2}} - 28327°_{5\frac{1}{2}}$	15	4702.720	8	*MB*	21258.341	$2382°_{4\frac{1}{2}} - 23640_{4\frac{1}{2}}$	24
4680.612	2	*WA*	21358.749	$4322°_{2\frac{1}{2}} - 25681_{1\frac{1}{2}}$	−30	4703.293	2	*MB*	21255.751		
4680.798	1	*MB*	21357.901			4703.634	2	*MB*	21254.210	$10114°_{2\frac{1}{2}} - 31369_{2\frac{1}{2}}$	0
4680.985	25	*MB*	21357.047	$11015_{3\frac{1}{2}} - 32372°_{4\frac{1}{2}}$	6	4703.990	10	*MB*	21252.602	$8927°_{5\frac{1}{2}} - 30180_{6\frac{1}{2}}$	20
4681.909	1	*MB*	21352.832	$9316_{3\frac{1}{2}} - 30669°_{4\frac{1}{2}}$	43	4704.546	1	*MB*	21250.090		
4683.044	3	*MB*	21347.657	$11949°_{3\frac{1}{2}} - 33296_{4\frac{1}{2}}$	42	4705.777	3	*MB*	21244.531		
4684.310	3	*MB*	21341.888	$12466°_{1\frac{1}{2}} - 33808_{2\frac{1}{2}}$	1	4705.836	4	*MB*	21244.265	$5942°_{3\frac{1}{2}} - 27187_{3\frac{1}{2}}$	16
4684.599	240	*MB*	21340.571	$7293°_{6\frac{1}{2}} - 28634_{5\frac{1}{2}}$	−6	4707.117	1	*MB*	21238.483	$7059°_{4\frac{1}{2}} - 28297_{3\frac{1}{2}}$	83
4685.213	50	*MB*	21337.775	$7011_{4\frac{1}{2}} - 28349°_{3\frac{1}{2}}$	−2	4707.476	1	*MB*	21236.864	$19483_{2\frac{1}{2}} - 40720°_{1\frac{1}{2}}$	−32
4686.143	2	*MB*	21333.540	$12326°_{6\frac{1}{2}} - 33659_{5\frac{1}{2}}$	−10	4707.933	40	*MB*	21234.802	$7092_{5\frac{1}{2}} - 28327°_{5\frac{1}{2}}$	−3
4686.699	4	*MB*	21331.009	$8789_{2\frac{1}{2}} - 30120°_{1\frac{1}{2}}$	−16	4708.678	4	*MB*	21231.443		
4686.772	60	*MB*	21330.677	$8804°_{4\frac{1}{2}} - 30134_{5\frac{1}{2}}$	−8	4709.036	1	*MB*			
4687.158	2	*MB*	21328.920	$11387°_{3\frac{1}{2}} - 32716_{2\frac{1}{2}}$	5	4709.292	1	*MB*	21228.675	$17300°_{3\frac{1}{2}} - 38529_{2\frac{1}{2}}$	−35

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4710.002	20	*MB*	21225.474	$3593°_{4\,1/2}-24819_{3\,1/2}$	23						
4710.206	4	*MB*	21224.555	$27432°_{4\,1/2}-48657_{3\,1/2}$	1	4739.570	2	*MB*	21093.060	$10114°_{2\,1/2}-31207_{3\,1/2}$	17
				$5675°_{4\,1/2}-26900_{3\,1/2}$	−35	4739.930	1	*MB*	21091.458	$12057°_{2\,1/2}-33148_{2\,1/2}$	−23
4711.294	1	*MB*	21219.654	$11015_{3\,1/2}-32235°_{3\,1/2}$	−5	4741.113	10	*MB*	21086.196	$12466°_{1\,1/2}-33552_{2\,1/2}$	44
4712.438	9	*MB*	21214.503	$12762°_{4\,1/2}-33977_{3\,1/2}$	4	4741.649	40	*MB*	21083.812	$8280°_{2\,1/2}-29364_{3\,1/2}$	19
4713.875	1	*MB*	21208.035	$4737°_{2\,1/2}-25945_{3\,1/2}$	13	4742.050	7	*MB*	21082.029	$10088°_{1\,1/2}-31170_{1\,1/2}$	25
4714.011	180	*MB*	21207.424	$8927°_{5\,1/2}-30134_{5\,1/2}$	28	4742.232	4	*MB*	21081.220	$5819°_{4\,1/2}-26900_{3\,1/2}$	−20
4714.828	90	*MB*	21203.749	$8531_{3\,1/2}-29735°_{4\,1/2}$	14	4742.800	5	*MB*	21078.696	$7259°_{3\,1/2}-28337_{2\,1/2}$	−42
4715.079	8	*MB*	21202.620	$7522°_{0\,1/2}-28725_{4\,1/2}$	−69	4743.473	8	*MB*	21075.705	$7259°_{3\,1/2}-28334_{4\,1/2}$	24
4715.532	3	*MB*	21200.583	$14097_{3\,1/2}-35298°_{2\,1/2}$	83	4743.718	6	*MB*	21074.616	$9771_{7\,1/2}-30846°_{7\,1/2}$	−9
4717.878	80	*MB*	21190.041	$5651°_{5\,1/2}-26841_{4\,1/2}$	15	4744.134	3	*MB*	21072.769	$11340°_{3\,1/2}-32413_{3\,1/2}$	21
4718.482	3	*MB*	21187.329	$2595°_{1\,1/2}-23782_{2\,1/2}$	−14	4744.238	1	*MB*	21072.307		
4718.783	3	*MB*	21185.977			4744.450	6	*MB*	21071.365		
4719.193	2	*MB*	21184.137	$5716°_{3\,1/2}-26900_{3\,1/2}$	0	4744.941	60	*MB*	21069.185	$3593°_{4\,1/2}-24663_{4\,1/2}$	12
4719.498	4	*MB*	21182.768	$16159°_{3\,1/2}-37342_{2\,1/2}$	−22	4747.167	140	*MB*	21059.305	$2581°_{4\,1/2}-23640_{4\,1/2}$	0
4719.545	3	*MB*	21182.557	$9778°_{2\,1/2}-30961_{1\,1/2}$	25	4747.257	2	*MB*	21058.906	$7278°_{1\,1/2}-28337_{2\,1/2}$	14
4720.092	4	*MB*	21180.102			4748.244	3	*MB*	21054.529	$13758°_{1\,1/2}-34813_{2\,1/2}$	−2
4721.050	6	*MB*	21175.804	$13758°_{1\,1/2}-34934_{2\,1/2}$	54	4748.364	5	*MB*	21053.996	$10035°_{5\,1/2}-31089_{5\,1/2}$	−23
4722.295	30	*MB*	21170.222	$4511°_{2\,1/2}-25681_{1\,1/2}$	−8	4749.233	9	*MB*	21050.144	$9778°_{2\,1/2}-30829_{3\,1/2}$	7
4722.749	4	*MB*	21168.186	$8423_{6\,1/2}-29591°_{6\,1/2}$	−14	4749.514	14	*MB*	21048.899	$12762°_{4\,1/2}-33811_{4\,1/2}$	−26
4723.319	30	*MB*	21165.632	$5675°_{4\,1/2}-26841_{4\,1/2}$	11	4750.596	1	*MB*	21044.105	$12365°_{4\,1/2}-33409_{3\,1/2}$	14
4724.683	3	*MB*	21159.522	$8789_{2\,1/2}-29948°_{2\,1/2}$	−11	4751.543	20	*MB*	21039.911	$10035°_{5\,1/2}-31075_{4\,1/2}$	19
4725.068	100	*MB*	21157.798	$4201°_{1\,1/2}-25359_{2\,1/2}$	5	4752.080	2	*MB*	21037.533	$6913°_{6\,1/2}-27950_{5\,1/2}$	34
4725.103	8	*MB*	21157.641	$11458_{5\,1/2}-32616°_{4\,1/2}$	−24	4752.258	25	*MB*	21036.745	$12260°_{3\,1/2}-33296_{4\,1/2}$	28
4726.852	5	*MB*	21149.812	$12260°_{3\,1/2}-33409_{3\,1/2}$	4	4753.636	5	*MB*	21030.647	$10314_{4\,1/2}-31344°_{3\,1/2}$	−18
4727.638	3	*MB*	21146.296	$10820_{2\,1/2}-31966°_{2\,1/2}$	34	4754.765	4	*MB*	21025.653	$11387°_{3\,1/2}-32413_{3\,1/2}$	39
4728.194	1	*MB*	21143.810	$27187_{3\,1/2}-48330°_{3\,1/2}$	67	4754.904	3	*MB*	21025.039		
4728.713	7	*MB*	21141.489	$2641°_{3\,1/2}-23782_{2\,1/2}$	57	4755.527	50	*MB*	21022.285	$5819°_{4\,1/2}-26841_{4\,1/2}$	14
4729.261	2	*MB*	21139.039	$10798°_{2\,1/2}-31937_{3\,1/2}$	−58	4756.053	12	*MB*	21019.960		
4729.643	3	*MB*	21137.332	$3363°_{2\,1/2}-24500_{2\,1/2}$	3	4756.582	1	*MB*	21017.622	$7713°_{4\,1/2}-28730_{3\,1/2}$	0
4730.097	70	*MB*	21135.303	$7202°_{2\,1/2}-28337_{2\,1/2}$	18	4757.422	2	*MB*	21013.911	$12097_{3\,1/2}-33111°_{3\,1/2}$	24
4730.807	2	*MB*	21132.131	$8131_{4\,1/2}-29263°_{5\,1/2}$	10	4757.839	100	*MB*	21012.069	$7713°_{4\,1/2}-28725_{4\,1/2}$	10
4731.076	4	*MB*	21130.930	$11007°_{1\,1/2}-32138_{2\,1/2}$	31	4758.522	7	*MB*	21009.053	$13758°_{1\,1/2}-34767_{1\,1/2}$	36
4732.362	8	*MB*	21125.187	$5716°_{3\,1/2}-26841_{4\,1/2}$	20	4759.211	7	*MB*	21006.012	$10924°_{4\,1/2}-31930_{4\,1/2}$	−47
4732.472	1	*MB*	21124.696	$10641°_{2\,1/2}-31766_{1\,1/2}$	30	4759.922	14	*MB*	21002.874	$8804°_{4\,1/2}-29807_{3\,1/2}$	20
				$6389°_{4\,1/2}-27514_{3\,1/2}$	−21						
						4760.472	2	*MB*	21000.448	$8280°_{2\,1/2}-29281_{2\,1/2}$	20
4733.536	90	*MB*	21119.948	$10114°_{2\,1/2}-31234_{2\,1/2}$	−47	4760.794	4	*MB*	20999.027	$2641°_{3\,1/2}-23640_{4\,1/2}$	23
				$10035°_{5\,1/2}-31155_{6\,1/2}$	36	4761.736	4	*MB*	20994.873	$19481_{4\,1/2}-40475°_{3\,1/2}$	−11
4733.839	5	*MB*	21118.596	$8774_{4\,1/2}-29892°_{3\,1/2}$	−16	4761.939	2	*MB*			
4735.332	20	*MB*	21111.938	$7522°_{5\,1/2}-28634_{5\,1/2}$	44	4762.294	3	*MB*	20992.413	$11325°_{2\,1/2}-32318_{3\,1/2}$	19
4735.520	1	*MB*	21111.100	$9634°_{1\,1/2}-30745_{1\,1/2}$	0	4762.842	3	*MB*	20989.998	$6389°_{4\,1/2}-27379_{5\,1/2}$	−8
4735.687	3	*MB*	21110.355			4763.292	1	*MB*	20988.015	$12057°_{2\,1/2}-33045_{2\,1/2}$	27
4736.192	4	*MB*	21108.104			4763.732	1	*MB*	20986.076	$7341_{5\,1/2}-28327°_{5\,1/2}$	13
4736.708	6	*MB*	21105.805	$9723°_{4\,1/2}-30829_{3\,1/2}$	16	4763.908	60	*MB*	20985.301	$8278_{5\,1/2}-29263°_{5\,1/2}$	17
4736.959	4	*MB*	21104.687	$8804°_{4\,1/2}-29908_{4\,1/2}$	7	4764.077	4	*MB*	20984.557	$7746°_{2\,1/2}-28730_{3\,1/2}$	30
4737.266	280	*MB*	21103.319	$8789_{2\,1/2}-29892°_{3\,1/2}$	22						
4737.765	1	*MB*	21101.096	$7233°_{5\,1/2}-28334_{4\,1/2}$	−32	4764.466	1	*MB*	20982.843	$13784°_{1\,1/2}-34767_{1\,1/2}$	−13
4739.068	2	*MB*	21095.295	$4266°_{3\,1/2}-25361_{4\,1/2}$	18	4764.792	4	*MB*	20981.408	$8927°_{5\,1/2}-29908_{4\,1/2}$	18
4739.145	35	*MB*	21094.952	$7202°_{2\,1/2}-28297_{3\,1/2}$	8	4765.270	1	*MB*	20979.303	$9723°_{4\,1/2}-30702_{4\,1/2}$	28
4739.516	90	*MB*	21093.301	$10058_{6\,1/2}-31151°_{5\,1/2}$	−6	4765.662	1	*MB*	20977.578	$11340°_{3\,1/2}-32318_{3\,1/2}$	1
				$4266°_{3\,1/2}-25359_{2\,1/2}$	12	4766.095	1	*MB*	20975.672		

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4767.303	1	*MB*	20970.357	$28117_{7\,1/2}-49087°_{7\,1/2}$	−3	4801.856	6	*MB*	20819.461	$12260°_{3\,1/2}-33079_{3\,1/2}$	38
4767.567	10	*MB*	20969.196	$4523°_{4\,1/2}-25492_{5\,1/2}$	−21	4803.362	7	*MB*	20812.934	$11325°_{2\,1/2}-32138_{2\,1/2}$	17
4768.218	8	*MB*	20966.333	$9778°_{2\,1/2}-30745_{1\,1/2}$	33	4803.554	7	*MB*	20812.102	$7522°_{5\,1/2}-28334_{4\,1/2}$	−31
4768.508	4	*MB*	20965.058	$13012°_{2\,1/2}-33977_{3\,1/2}$	13	4803.974	3	*MB*	20810.282	$11387°_{3\,1/2}-32197_{4\,1/2}$	32
4768.785	90	*MB*	20963.840	$7011_{4\,1/2}-27975°_{4\,1/2}$	25	4804.631	3	*MB*	20807.437	$7878°_{3\,1/2}-28685_{2\,1/2}$	7
4769.344	2	*MB*	20961.383	$8774_{4\,1/2}-29735°_{4\,1/2}$	34	4806.198	5	*MB*	20800.653	$10274°_{3\,1/2}-31075_{4\,1/2}$	21
4769.783	4	*MB*	20959.454	$3703°_{3\,1/2}-24663_{4\,1/2}$	−6	4806.512	4	*MB*	20799.294	$17171°_{5\,1/2}-37970_{5\,1/2}$	7
4773.299	2	*MB*	20944.015	$10088°_{1\,1/2}-31032_{0\,1/2}$	44	4806.783	3	*MB*	20798.121	$11340°_{3\,1/2}-32138_{2\,1/2}$	22
4773.942	200	*MB*	20941.194	$7454_{1\,1/2}-28396°_{2\,1/2}$	−4	4807.005	5	*MB*	20797.161	$3703°_{3\,1/2}-24500_{2\,1/2}$	0
4774.816	20	*MB*	20937.361	$19920°_{3\,1/2}-40858_{4\,1/2}$	−30	4807.334	1	*MB*	20795.738	$9198°_{3\,1/2}-29994_{2\,1/2}$	23
4775.460	7	*MB*	20934.538	$5010°_{2\,1/2}-25945_{3\,1/2}$	12	4808.648	5	*MB*	20790.055	$3363°_{2\,1/2}-24153_{3\,1/2}$	16
4775.817	2	*MB*	20932.973	$10274°_{3\,1/2}-31207_{3\,1/2}$	17	4809.076	8	*MB*			
4776.287	8	*MB*	20930.913	$12365°_{4\,1/2}-33296_{4\,1/2}$	−85	4809.232	1	*MB*			
4776.674	1	*MB*	20929.217	$14097_{3\,1/2}-35026°_{4\,1/2}$	−37	4809.816	2	*MB*	20785.007	$12260°_{3\,1/2}-33045_{2\,1/2}$	0
4776.895	3	*MB*	20928.249	$10114°_{2\,1/2}-31043_{2\,1/2}$	22	4810.552	1	*MB*			
4777.245	1	*MB*	20926.716	$10820_{2\,1/2}-31747°_{1\,1/2}$	−40	4810.829	1	*MB*	20780.630	$10454°_{1\,1/2}-31234_{2\,1/2}$	23
4779.422	2	*MB*	20917.184	$10641°_{2\,1/2}-31558_{3\,1/2}$	0	4812.494	4	*MB*	20773.441	$7061°_{0\,1/2}-27835_{1\,1/2}$	46
4780.086	6	*MB*	20914.278	$11458_{5\,1/2}-32372°_{4\,1/2}$	11	4814.614	2	*MB*	20764.294	$16159°_{3\,1/2}-36923_{4\,1/2}$	41
4780.248	25	*MB*	20913.570	$11949°_{3\,1/2}-32862_{3\,1/2}$	−7	4815.591	2	*MB*	20760.081	$10798°_{2\,1/2}-31558_{3\,1/2}$	10
4781.482	2	*MB*	20908.172	$12751°_{5\,1/2}-33659_{5\,1/2}$	−13	4817.235	2	*MB*	20752.996	$14963°_{5\,1/2}-35716_{5\,1/2}$	14
4783.392	3	*MB*	20899.824	$4459°_{3\,1/2}-25359_{2\,1/2}$	10	4817.779	1	*MB*	20750.653	$14276_{5\,1/2}-35026°_{4\,1/2}$	7
4783.961	35	*MB*	20897.338	$12762°_{4\,1/2}-33659_{5\,1/2}$	11	4818.291	4	*MB*	20748.448	$8280°_{2\,1/2}-29029_{1\,1/2}$	41
4784.790	15	*MB*	20893.718	$5924°_{1\,1/2}-26817_{2\,1/2}$	−17	4822.100	5	*MB*	20732.059	$6517°_{2\,1/2}-27249_{2\,1/2}$	9
4785.196	12	*MB*	20891.945	$12097_{3\,1/2}-32989°_{3\,1/2}$	3	4822.262	4	*MB*	20731.362	$16192°_{4\,1/2}-36923_{4\,1/2}$	40
4785.758	1	*MB*	20889.491	$12704_{1\,1/2}-33594°_{2\,1/2}$	−26	4822.962	1	*MB*	20728.354	$6521°_{1\,1/2}-27249_{2\,1/2}$	17
4786.757	2	*MB*	20885.132	$2382°_{4\,1/2}-23267_{3\,1/2}$	27	4825.750	1	*MB*	20716.378	$10454°_{1\,1/2}-31170_{1\,1/2}$	6
4787.165	40	*MB*	20883.352	$7092_{5\,1/2}-27975°_{4\,1/2}$	−1	4826.246	1	*MB*	20714.249	$10114°_{2\,1/2}-30829_{3\,1/2}$	9
4788.230	5	*MB*	20878.707	$8402°_{3\,1/2}-29281_{2\,1/2}$	1					$9269°_{0\,1/2}-29984_{1\,1/2}$	24
4788.729	8	*MB*	20876.531	$5964°_{3\,1/2}-26841_{4\,1/2}$	44	4833.119	1	*MB*	20684.793	$16159°_{3\,1/2}-36844_{2\,1/2}$	24
4789.568	3	*MB*	20872.875	$10088°_{1\,1/2}-30961_{1\,1/2}$	−2	4835.279	5	*MB*	20675.553	$7259°_{3\,1/2}-27934_{4\,1/2}$	−9
4789.679	30	*MB*	20872.391	$5969°_{5\,1/2}-26841_{4\,1/2}$	14	4835.673	40	*MB*	20673.868	$7722_{2\,1/2}-28396°_{2\,1/2}$	3
4790.773	1	*MB*	20867.624	$7818°_{1\,1/2}-28685_{2\,1/2}$	14	4836.422	5	*MB*	20670.666	$5010°_{2\,1/2}-25681_{1\,1/2}$	49
4790.953	1	*MB*	20866.840	$9198°_{3\,1/2}-30065_{3\,1/2}$	3	4837.134	3	*MB*	20667.624	$3995°_{3\,1/2}-24663_{4\,1/2}$	31
4792.607	1	*MB*	20859.639	$8169°_{1\,1/2}-29029_{1\,1/2}$	−15	4839.628	3	*MB*	20656.973	$7293°_{6\,1/2}-27950_{5\,1/2}$	23
4792.940	2	*MB*	20858.190	$9778°_{2\,1/2}-30637_{2\,1/2}$	19	4839.700	2	*MB*	20656.666	$10088°_{1\,1/2}-30745_{1\,1/2}$	20
4793.076	2	*MB*	20857.598			4841.906	1	*MB*	20647.255	$12762°_{4\,1/2}-33409_{3\,1/2}$	0
4793.122	40	*MB*	20857.398	$11340°_{3\,1/2}-32197_{4\,1/2}$	14	4842.818	1	*MB*			
4793.310	5	*MB*	20856.580	$11759_{5\,1/2}-32616°_{4\,1/2}$	28	4843.244	1	*MB*	20641.551	$10703_{4\,1/2}-31344°_{3\,1/2}$	28
4794.018	1	*MB*	20853.500	$8175°_{2\,1/2}-29029_{1\,1/2}$	10	4844.235	9	*MB*			
4795.182	10	*MB*	20848.438	$4511°_{2\,1/2}-25359_{2\,1/2}$	9	4844.290	25	*WA*	20637.094	$6549°_{2\,1/2}-27187_{3\,1/2}$	−44
4795.552	8	*MB*	20846.829	$7878°_{3\,1/2}-28725_{4\,1/2}$	9	4844.504	2	*MB*	20636.182	$13659°_{4\,1/2}-34295_{4\,1/2}$	61
4796.537	1	*MB*	20842.548	$4910°_{5\,1/2}-25753_{6\,1/2}$	20	4844.876	1	*MB*	20634.598	$7341_{5\,1/2}-27975°_{4\,1/2}$	−13
4797.344	2	*MB*	20839.042	$9053_{3\,1/2}-29892°_{3\,1/2}$	−5					$8804°_{4\,1/2}-29438_{5\,1/2}$	5
4797.426	3	*MB*	20838.686	$8896_{5\,1/2}-29735°_{4\,1/2}$	2	4845.071	8	*MB*	20633.767	$10924°_{4\,1/2}-31558_{3\,1/2}$	18
4797.730	4	*MB*	20837.366	$10314_{4\,1/2}-31151°_{5\,1/2}$	−5	4845.322	12	*MB*	20632.698	$2634°_{2\,1/2}-23267_{3\,1/2}$	14
										$7202°_{2\,1/2}-27835_{1\,1/2}$	−5
4797.848	2	*MB*	20836.853	$4844°_{1\,1/2}-25681_{1\,1/2}$	9						
4798.494	1	*MB*	20834.048	$17300°_{3\,1/2}-38134_{4\,1/2}$	−41	4845.796	8	*MB*			
4800.217	1	*MB*	20826.570	$5118°_{2\,1/2}-25945_{3\,1/2}$	−19	4846.586	100	*MB*	20627.318	$7722_{2\,1/2}-28349°_{3\,1/2}$	21
4800.905	60	*MB*	20823.586	$7293°_{6\,1/2}-28117_{7\,1/2}$	5	4846.943	15	*MB*	20625.798	$2641°_{3\,1/2}-23267_{3\,1/2}$	7
4801.071	2	*MB*	20822.865	$7522°_{0\,1/2}-28345_{0\,1/2}$	8	4847.914	50	*MB*	20621.667	$7713°_{4\,1/2}-28334_{4\,1/2}$	0

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
4848.266	20	*MB*	20620.170	$8423_{6\,1/2}$ $-29043^{\circ}_{6\,1/2}$	−11	4887.274	1	*MB*	20455.591	$7059^{\circ}_{4\,1/2}-27514_{3\,1/2}$	4
4850.216	40	*MB*	20611.880	$11325^{\circ}_{2\,1/2}-31937_{3\,1/2}$	8	4888.446	3	*MB*	20450.687	$4910^{\circ}_{5\,1/2}-25361_{4\,1/2}$	−23
4850.688	30	*MB*	20609.874	$7202^{\circ}_{2\,1/2}-27812_{2\,1/2}$	6	4888.639	10	*MB*	20449.880	$3703^{\circ}_{3\,1/2}-24153_{3\,1/2}$	8
4850.901	25	*MB*	20608.969	$7202^{\circ}_{2\,1/2}-27811_{3\,1/2}$	3	4890.345	15	*MB*	20442.746	$9723^{\circ}_{4\,1/2}-30166_{3\,1/2}$	24
4852.376	10	*MB*	20602.705	$12260^{\circ}_{3\,1/2}-32862_{3\,1/2}$	26	4890.426	7	*MB*	20442.407	$18393_{3\,1/2}$ $-38835^{\circ}_{2\,1/2}$	1
4853.697	10	*MB*	20597.097	$11340^{\circ}_{3\,1/2}-31937_{3\,1/2}$	43	4890.928	2	*MB*	20440.309	$6913^{\circ}_{6\,1/2}-27353_{7\,1/2}$	32
4856.690	2	*MB*	20584.404	$7713^{\circ}_{4\,1/2}-28297_{3\,1/2}$	21					$11325^{\circ}_{2\,1/2}-31766_{1\,1/2}$	−18
4857.421	8	*MB*	20581.307	$4910^{\circ}_{5\,1/2}-25492_{5\,1/2}$	19	4891.272	20	*MB*	20438.872	$14481^{\circ}_{2\,1/2}-34920_{3\,1/2}$	14
4857.978	10	*MB*	20578.947	$8702^{\circ}_{1\,1/2}-29281_{2\,1/2}$	17	4891.872	30	*MB*	20436.365	$12365^{\circ}_{4\,1/2}-32802_{5\,1/2}$	6
4858.269	12	*MB*				4893.953	150	*MB*	20427.675	$10703_{4\,1/2}$ $-31130^{\circ}_{3\,1/2}$	−2
4858.725	60	*MB*	20575.783	$9316_{3\,1/2}$ $-29892^{\circ}_{3\,1/2}$	19	4894.868	9	*MB*			
4859.042	5	*MB*	20574.441	$13758^{\circ}_{1\,1/2}-34333_{2\,1/2}$	13	4895.555	20	*MB*	20420.991	$7011_{4\,1/2}$ $-27432^{\circ}_{4\,1/2}$	13
4859.564	15	*MB*	20572.231	$15565^{\circ}_{2\,1/2}-36137_{2\,1/2}$	47	4895.992	12	*MB*	20419.168	$7878^{\circ}_{3\,1/2}-28297_{3\,1/2}$	23
4859.935	8	*MB*	20570.660	$14727_{1\,1/2}$ $-35298^{\circ}_{2\,1/2}$	11	4896.149	5	*MB*	20418.513	$9316_{3\,1/2}$ $-29735^{\circ}_{4\,1/2}$	12
4860.911	2	*MB*	20566.530	$10641^{\circ}_{2\,1/2}-31207_{3\,1/2}$	45	4897.809	15	*MB*	20411.593	$9723^{\circ}_{4\,1/2}-30134_{5\,1/2}$	18
4861.120	5	*MB*	20565.646	$2634^{\circ}_{2\,1/2}-23200_{2\,1/2}$	−18	4897.961	10	*MB*	20410.959	$6967_{6\,1/2}$ $-27378^{\circ}_{5\,1/2}$	−8
4861.820	7	*MB*	20562.685	$5118^{\circ}_{2\,1/2}-25681_{1\,1/2}$	3	4898.338	15	*MB*	20409.388	$10798^{\circ}_{2\,1/2}-31207_{3\,1/2}$	17
4862.559	20	*MB*	20559.560	$26900_{3\,1/2}$ $-47459^{\circ}_{2\,1/2}$	20	4898.835	5	*MB*	20407.318	$13758^{\circ}_{1\,1/2}-34166_{1\,1/2}$	−50
				$3593^{\circ}_{4\,1/2}-24153_{3\,1/2}$	−23	4899.447	5	*MB*	20404.769	$8280^{\circ}_{2\,1/2}-28685_{2\,1/2}$	−42
4863.324	10	*MB*	20556.326	$7278^{\circ}_{1\,1/2}-27835_{1\,1/2}$	15	4900.239	15	*MB*	20401.471	$14625_{5\,1/2}$ $-35026^{\circ}_{4\,1/2}$	30
4863.666	15	*MB*	20554.880	$8175^{\circ}_{2\,1/2}-28730_{3\,1/2}$	32	4900.962	6	*MB*	20398.461	$5283^{\circ}_{0\,1/2}-25681_{1\,1/2}$	3
4863.829	10	*MB*	20554.192	$10274^{\circ}_{3\,1/2}-30829_{3\,1/2}$	39	4901.397	15	*MB*	20396.651	$4266^{\circ}_{3\,1/2}-24663_{4\,1/2}$	−6
4864.848	1	*MB*	20549.886	$11387^{\circ}_{3\,1/2}-31937_{3\,1/2}$	−35	4903.693	15	*MB*	20387.101	$9778^{\circ}_{2\,1/2}-30166_{3\,1/2}$	30
4865.163	20	*MB*	20548.556	$10088^{\circ}_{1\,1/2}-30637_{2\,1/2}$	39	4904.164	10	*MB*	20385.143	$13659^{\circ}_{4\,1/2}-34044_{4\,1/2}$	31
4865.612	8	*MB*	20546.660	$15565^{\circ}_{2\,1/2}-36112_{3\,1/2}$	59	4904.744	30	*MB*	20382.732	$6517^{\circ}_{2\,1/2}-26900_{3\,1/2}$	−2
4866.424	25	*MB*	20543.231	$11387^{\circ}_{3\,1/2}-31930_{4\,1/2}$	27	4908.053	20	*MB*	20368.991	$11949^{\circ}_{3\,1/2}-32318_{3\,1/2}$	5
4867.063	12	*MB*	20540.534	$13012^{\circ}_{2\,1/2}-33552_{2\,1/2}$	48	4908.634	12	*MB*	20366.580	$8896_{5\,1/2}$ $-29263^{\circ}_{5\,1/2}$	−28
4868.571	15	*MB*	20534.172	$12762^{\circ}_{4\,1/2}-33296_{4\,1/2}$	8	4909.901	20	*MB*	20361.324	$11007^{\circ}_{1\,1/2}-31369_{2\,1/2}$	31
4869.745	8	*MB*	20529.222	$10641^{\circ}_{2\,1/2}-31170_{1\,1/2}$	19	4910.165	3	*MB*	20360.230	$15565^{\circ}_{2\,1/2}-35925_{3\,1/2}$	−31
4869.904	1	*MB*	20528.552	$13515^{\circ}_{3\,1/2}-34044_{4\,1/2}$	−35	4911.303	10	*MB*	20355.512	$10314_{4\,1/2}$ $-30669^{\circ}_{4\,1/2}$	−27
4870.894	12	*MB*	20524.379	$10820_{2\,1/2}$ $-31344^{\circ}_{3\,1/2}$	38	4914.603	15	*MB*	20341.844	$9723^{\circ}_{4\,1/2}-30065_{3\,1/2}$	15
4872.230	12	*MB*	20518.751	$12097_{3\,1/2}$ $-32616^{\circ}_{4\,1/2}$	9	4914.929	80	*MB*	20340.495	$7092_{5\,1/2}$ $-27432^{\circ}_{4\,1/2}$	−21
4873.108	4	*MB*	20515.055	$4844^{\circ}_{1\,1/2}-25359_{2\,1/2}$	13	4915.838	10	*MB*	20336.734	$10088^{\circ}_{1\,1/2}-30425_{2\,1/2}$	25
4873.993	100	*MB*	20511.330	$8927^{\circ}_{5\,1/2}-29438_{5\,1/2}$	27	4917.941	8	*MB*	20328.038	$8402^{\circ}_{3\,1/2}-28730_{3\,1/2}$	−5
4874.208	7	*MB*	20510.425	$6389^{\circ}_{4\,1/2}-26900_{3\,1/2}$	13	4918.215	8	*MB*	20326.905	$8702^{\circ}_{1\,1/2}-29029_{1\,1/2}$	−3
4877.402	8	*MB*	20496.994	$12365^{\circ}_{4\,1/2}-32862_{3\,1/2}$	33	4919.673	12	*MB*	20320.881	$7059^{\circ}_{4\,1/2}-27379_{5\,1/2}$	4
4877.490	10	*MB*	20496.624	$4322^{\circ}_{2\,1/2}-24819_{3\,1/2}$	−1	4920.445	4	*MB*	20317.693	$13217_{3\,1/2}$ $-33535^{\circ}_{3\,1/2}$	33
4877.747	10	*MB*	20495.544	$17475^{\circ}_{4\,1/2}-37970_{5\,1/2}$	35	4920.654	7	*MB*	20316.830	$12762^{\circ}_{4\,1/2}-33079_{3\,1/2}$	−40
4878.170	10	*MB*	20493.767	$19982_{4\,1/2}$ $-40475^{\circ}_{3\,1/2}$	29	4921.647	4	*MB*	20312.731	$7522^{\circ}_{0\,1/2}-27835_{1\,1/2}$	−43
4878.452	6	*MB*	20492.582	$9491^{\circ}_{0\,1/2}-29984_{1\,1/2}$	23	4921.788	10	*MB*	20312.149	$7202^{\circ}_{2\,1/2}-27514_{3\,1/2}$	18
4879.230	5	*MB*	20489.315	$8774_{4\,1/2}$ $-29263^{\circ}_{5\,1/2}$	41	4922.216	10	*MB*	20310.383	$10114^{\circ}_{2\,1/2}-30425_{2\,1/2}$	−82
4882.457	300	*MB*	20475.773	$12326^{\circ}_{6\,1/2}-32802_{5\,1/2}$	25	4922.719	6	*MB*	20308.307	$2595^{\circ}_{1\,1/2}-22903_{1\,1/2}$	−22
4883.692	12	*MB*	20470.595	$14827_{3\,1/2}$ $-35298^{\circ}_{2\,1/2}$	28	4922.768	4	*MB*	20308.105	$4511^{\circ}_{2\,1/2}-24819_{3\,1/2}$	28
4884.661	10	*MB*	20466.534	$6913^{\circ}_{6\,1/2}-27379_{5\,1/2}$	−22	4925.569	2	*MB*	20296.557	$6521^{\circ}_{1\,1/2}-26817_{2\,1/2}$	−46
4885.232	15	*MB*	20464.142	$11949^{\circ}_{3\,1/2}-32413_{3\,1/2}$	−14	4928.090	40	*MB*	20286.174	$9778^{\circ}_{2\,1/2}-30065_{3\,1/2}$	−3
4885.337	6	*MB*	20463.702	$11387^{\circ}_{3\,1/2}-31851_{2\,1/2}$	36	4928.856	12	*MB*	20283.021	$10924^{\circ}_{4\,1/2}-31207_{3\,1/2}$	−29
4885.407	2	*MB*	20463.409			4929.108	4	*MB*	20281.985	$10869_{4\,1/2}$ $-31151^{\circ}_{5\,1/2}$	−7
4885.916	8	*MB*	20461.277	$13515^{\circ}_{3\,1/2}-33977_{3\,1/2}$	−9	4930.300	5	*MB*	20277.081	$10684^{\circ}_{0\,1/2}-30961_{1\,1/2}$	4
4886.340	1	*MB*	20459.502	$7878^{\circ}_{3\,1/2}-28337_{2\,1/2}$	16	4932.109	10	*MB*	20269.644	$5675^{\circ}_{4\,1/2}-25945_{3\,1/2}$	11
4887.074	8	*MB*	20456.429	$7878^{\circ}_{3\,1/2}-28334_{4\,1/2}$	1	4934.194	4	*MB*	20261.079	$12057^{\circ}_{2\,1/2}-32318_{3\,1/2}$	11

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
4936.247	15	*MB*	20252.652	$5513_{5/2} - 25766°_{4/2}$	6	4978.201	8	*MB*	20081.974	$4737°_{2/2} - 24819_{3/2}$	14
4936.486	6	*MB*	20251.672			4978.840	3	*MB*	20079.397	$3703°_{3/2} - 23782_{2/2}$	3
4937.182	12	*MB*	20248.817	$11949°_{3/2} - 32197_{4/2}$	24	4981.817	4	*MB*	20067.398	$13012°_{2/2} - 33079_{3/2}$	−18
4938.220	2	*MB*	20244.561	$10798°_{2/2} - 31043_{2/2}$	6	4983.008	6	*MB*	20062.602	$15235_{1/2} - 35298°_{2/2}$	−8
4939.559	8	*MB*	20239.073	$8927°_{5/2} - 29166_{4/2}$	−9	4983.439	8	*MB*	20060.867	$10684°_{0/2} - 30745_{1/2}$	22
4939.867	8	*MB*	20237.811	$7713°_{4/2} - 27950_{5/2}$	11	4983.727	4	*MB*	20059.708	$7293°_{6/2} - 27353_{7/2}$	−23
4940.303	8	*MB*	20236.025	$14625_{5/2} - 34861°_{5/2}$	2	4984.133	5	*MB*	20058.074	$12260°_{3/2} - 32318_{3/2}$	−12
4941.066	10	*MB*	20232.900	$11325°_{2/2} - 31558_{3/2}$	56	4984.428	80	*MB*	20056.887	$8280°_{2/2} - 28337_{2/2}$	19
4942.408	7	*MB*	20227.406	$11340°_{3/2} - 31568_{4/2}$	−14	4984.572	30	*MB*	20056.307	$7878°_{3/2} - 27934_{4/2}$	−2
4943.442	250	*MB*	20223.176	$9725_{3/2} - 29948°_{2/2}$	−4	4986.046	7	*MB*	20050.378	$12751°_{5/2} - 32802_{5/2}$	−4
4943.838	60	*MB*	20221.556	$7713°_{4/2} - 27934_{4/2}$	7	4986.386	100	*MB*	20049.011	$8278_{5/2} - 28327°_{5/2}$	−5
4944.614	200	*MB*	20218.382	$8131_{4/2} - 28349°_{3/2}$	17	4986.962	8	*MB*	20046.695	$3593°_{4/2} - 23640_{4/2}$	15
4946.622	15	*MB*	20210.175	$10035°_{5/2} - 30245_{4/2}$	8	4987.793	8	*MB*	20043.355	$11325°_{2/2} - 31369_{2/2}$	44
4947.874	7	*MB*	20205.061	$9778°_{2/2} - 29984_{1/2}$	−4	4988.159	5	*MB*	20041.885		
4948.242	5	*MB*	20203.559	$10820_{2/2} - 31024°_{2/2}$	−30	4988.414	15	*MB*	20040.860	$4459°_{3/2} - 24500_{2/2}$	−23
4948.339	2	*MB*	20203.163	$4459°_{3/2} - 24663_{4/2}$	−19	4989.252	10	*MB*	20037.494	$7341_{5/2} - 27378°_{5/2}$	−13
				$6638°_{4/2} - 26841_{4/2}$	37					$3745°_{1/2} - 23782_{2/2}$	−21
4949.528	80	*MB*	20198.309	$15517°_{6/2} - 35716_{5/2}$	−1	4989.789	1	*MB*	20035.338	$11007°_{1/2} - 31043_{2/2}$	27
4951.674	10	*MB*	20189.556	$11949°_{3/2} - 32138_{2/2}$	47	4990.402	4	*MB*	20032.877		
4951.894	5	*MB*	20188.659	$11742°_{5/2} - 31930_{4/2}$	−31	4991.013	100	*MB*	20030.424	$11309_{7/2} - 31340°_{6/2}$	4
4952.132	4	*MB*	20187.688	$10641°_{2/2} - 30829_{3/2}$	7	4991.591	12	*MB*	20028.105	$9778°_{2/2} - 29807_{3/2}$	13
4953.310	8	*MB*	20182.888	$10454°_{1/2} - 30637_{2/2}$	3	4991.915	3	*MB*	20026.805	$7878°_{3/2} - 27905_{4/2}$	−23
4954.506	2	*MB*	20178.016	$4322°_{2/2} - 24500_{2/2}$	−31	4992.746	7	*MB*	20023.472	$13784°_{1/2} - 33808_{2/2}$	−10
4956.257	15	*MB*	20170.887	$11387°_{3/2} - 31558_{3/2}$	−7	4994.024	2	*MB*	20018.348		
4956.938	10	*MB*	20168.116	$8169°_{1/2} - 28337_{2/2}$	0	4994.477	50	*MB*	20016.532	$8280°_{2/2} - 28297_{3/2}$	5
4957.225	2	*MB*	20166.948	$9725_{3/2} - 29892°_{3/2}$	4	4994.724	50	*MB*	20015.542	$9778°_{2/2} - 29794_{3/2}$	12
4957.561	2	*MB*	20165.581	$12326°_{6/2} - 32492_{5/2}$	−39	4997.958	5	*MB*	20002.591	$5942°_{3/2} - 25945_{3/2}$	−6
4958.455	15	*MB*	20161.946	$8175°_{2/2} - 28337_{2/2}$	−4	4998.446	20	*MB*	20000.638	$13659°_{4/2} - 33659_{5/2}$	0
4959.419	8	*MB*	20158.027	$3995°_{3/2} - 24153_{3/2}$	21	4999.677	1	*MB*	19995.714	$10641°_{2/2} - 30637_{2/2}$	0
4959.598	5	*MB*	20157.299	$13436_{2/2} - 33594°_{2/2}$	1	5000.298	4	*MB*	19993.231	$13117_{4/2} - 33111°_{3/2}$	−9
4960.601	4	*MB*	20153.223	$12260°_{3/2} - 32413_{3/2}$	−34	5000.958	12	*MB*	19990.592	$7259°_{3/2} - 27249_{2/2}$	−1
4960.847	50	*MB*	20152.224	$13659°_{4/2} - 33811_{4/2}$	−13	5001.238	8	*MB*	19989.473	$4511°_{2/2} - 24500_{2/2}$	−25
4961.501	40	*MB*	20149.568	$5616_{4/2} - 25766°_{4/2}$	−47	5002.478	8	*MB*	19984.518	$7202°_{2/2} - 27187_{3/2}$	0
4962.101	10	*MB*	20147.131	$8896_{5/2} - 29043°_{6/2}$	7	5002.778	50	*MB*	19983.320	$8702°_{1/2} - 28685_{2/2}$	6
4962.776	12	*MB*	20144.391	$10035°_{5/2} - 30180_{6/2}$	6	5003.167	8	*MB*	19981.766	$11949°_{3/2} - 31930_{4/2}$	19
4964.354	5	*MB*	20137.988	$12097_{3/2} - 32235°_{3/2}$	25	5003.470	15	*MB*	19980.556	$2595°_{1/2} - 22576_{2/2}$	30
4967.250	12	*MB*	20126.247	$12365°_{4/2} - 32492_{5/2}$	16	5004.089	7	*MB*	19978.084	$16159°_{3/2} - 36137_{2/2}$	17
				$5819°_{4/2} - 25945_{3/2}$	−35	5005.861	15	*MB*	19971.012	$10454°_{1/2} - 30425_{2/2}$	−64
4968.396	50	*MB*	20121.605	$8175°_{2/2} - 28297_{3/2}$	−4	5007.161	2	*MB*	19965.827	$14963°_{5/2} - 34928_{4/2}$	−41
4970.412	60	*MB*	20113.444	$17475°_{4/2} - 37588_{3/2}$	−5	5010.523	6	*MB*	19952.431	$16159°_{3/2} - 36112_{3/2}$	−53
4970.906	10	*MB*	20111.445	$25753_{6/2} - 45864°_{5/2}$	−11	5011.760	200	*MB*	19947.506	$8448_{2/2} - 28396°_{2/2}$	−2
4971.497	300	*MB*	20109.054	$14404°_{7/2} - 34513_{6/2}$	−13	5014.190	9	*MB*	19937.839	$12260°_{3/2} - 32197_{4/2}$	−54
4972.871	1	*MB*	20103.498			5015.140	10	*MB*	19934.063	$7878°_{3/2} - 27812_{2/2}$	−6
4973.215	15	*MB*	20102.108	$5651°_{5/2} - 25753_{6/2}$	−27	5015.365	7	*MB*	19933.168	$7878°_{3/2} - 27811_{3/2}$	1
4973.706	1	*MB*	20100.123	$12762°_{4/2} - 32862_{3/2}$	−2	5016.165	4	*MB*	19929.989	$6549°_{2/2} - 26479_{1/2}$	−23
4976.455	7	*MB*	20089.020	$7746°_{2/2} - 27835_{1/2}$	−27	5017.045	30	*MB*	19926.494	$8804°_{4/2} - 28730_{3/2}$	6
4976.567	6	*MB*	20088.568	$5010°_{2/2} - 25099_{1/2}$	−43	5018.446	7	*MB*	19920.931	$8804°_{4/2} - 28725_{4/2}$	7
4977.197	80	*MB*	20086.025	$7293°_{6/2} - 27379_{5/2}$	14	5019.073	7	*MB*	19918.442	$13675_{2/2} - 33594°_{2/2}$	13
4977.770	8	*MB*	20083.713	$9723°_{4/2} - 29807_{3/2}$	−29	5022.363	10	*MB*	19905.395	$10088°_{1/2} - 29994_{2/2}$	−5
4977.933	12	*MB*	20083.056	$9198°_{3/2} - 29281_{2/2}$	8	5022.647	8	*MB*	19904.269	$10924°_{4/2} - 30829_{3/2}$	21

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5022.869	250	*MB*	19903.389	$8423_{61/2}-28327^{\circ}_{51/2}$	−9	5075.541	30	*MB*	19696.842	$11454_{61/2}-31151^{\circ}_{51/2}$	9
5023.482	10	*MB*	19900.961	$8448_{21/2}-28349^{\circ}_{31/2}$	20	5076.483	150	*MB*	19693.187	$11458_{51/2}-31151^{\circ}_{51/2}$	7
5024.785	7	*MB*	19895.800	$17300^{\circ}_{31/2}-37196_{41/2}$	−28	5076.712	30	*MB*	19692.299	$10058_{61/2}-29750^{\circ}_{51/2}$	−21
5025.049	8	*MB*	19894.755	$9778^{\circ}_{21/2}-29673_{21/2}$	−28	5077.206	6	*MB*	19690.383	$25753_{61/2}-45443^{\circ}_{71/2}$	16
5025.226	15	*MB*	19894.054	$13515^{\circ}_{31/2}-33409_{31/2}$	10	5077.851	80	*MB*	19687.882	$11387^{\circ}_{31/2}-31075_{41/2}$	10
5025.443	20	*MB*	19893.195	$13217_{31/2}-33111^{\circ}_{31/2}$	8	5078.355	25	*MB*	19685.928	$32372^{\circ}_{41/2}-52058_{41/2}$	−37
5025.974	12	*MB*	19891.093	$10274^{\circ}_{31/2}-30166_{31/2}$	8					$5675^{\circ}_{41/2}-25361_{41/2}$	17
5026.998	7	*MB*	19887.042	$4266^{\circ}_{31/2}-24153_{31/2}$	−26	5078.822	2	*MB*	19684.118	$14481^{\circ}_{21/2}-34166_{11/2}$	9
5027.340	40	*MB*	19885.689	$11454_{61/2}-31340^{\circ}_{61/2}$	−2	5079.678	1000	*MB*	19680.801	$11165_{81/2}-30846^{\circ}_{71/2}$	15
5028.269	30b	*MB*	19882.015	$11458_{51/2}-31340^{\circ}_{61/2}$	−24	5079.975	6	*MB*	19679.650	$10114^{\circ}_{21/2}-29794_{31/2}$	17
5030.980	30	*MB*	19871.301	$13117_{41/2}-32989^{\circ}_{31/2}$	6	5081.349	8	*MB*	19674.329	$13436_{21/2}-33111^{\circ}_{31/2}$	20
5031.445	5	*MB*	19869.465	$12097_{31/2}-31966^{\circ}_{21/2}$	−6	5081.648	7	*MB*	19673.171	$5819^{\circ}_{41/2}-25492_{51/2}$	34
5032.002	60	*MB*	19867.265	$11340^{\circ}_{31/2}-31207_{31/2}$	−63	5082.244	10	*MB*	19670.864	$12260^{\circ}_{31/2}-31930_{41/2}$	16
5032.958	4	*MB*	19863.492	$15434_{21/2}-35298^{\circ}_{21/2}$	1	5083.162	8	*MB*	19667.312	$13217_{31/2}-32885^{\circ}_{21/2}$	−78
5036.082	3	*MB*	19851.170	$14481^{\circ}_{21/2}-34333_{21/2}$	2	5083.275	12	*MB*	19666.875	$7713^{\circ}_{41/2}-27379_{51/2}$	15
5036.205	3	*MB*	19850.685	$13012^{\circ}_{21/2}-32862_{31/2}$	13	5086.089	6	*MB*	19655.994	$14252_{31/2}-33908^{\circ}_{41/2}$	−20
5036.351	2	*MB*	19850.110	$14315^{\circ}_{01/2}-34166_{11/2}$	3	5086.185	7	*MB*	19655.623	$2634^{\circ}_{21/2}-22290_{11/2}$	−25
5037.787	250	*MB*	19844.452	$8131_{41/2}-27975^{\circ}_{41/2}$	50	5086.577	12	*MB*	19654.108	$11015_{31/2}-30669^{\circ}_{41/2}$	−14
5039.269	10	*MB*	19838.616	$10798^{\circ}_{21/2}-30637_{21/2}$	14	5087.462	5	*MB*	19650.689	$12762^{\circ}_{41/2}-32413_{31/2}$	−15
5039.800	80b	*MB*	19836.526	$13027_{61/2}-32864^{\circ}_{51/2}$	6	5089.490	12	*MB*	19642.859	$8702^{\circ}_{11/2}-28345_{01/2}$	−9
5041.381	15	*MB*	19830.305	$8804^{\circ}_{41/2}-28634_{51/2}$	13	5089.881	1	*MB*	19641.350	$9723^{\circ}_{41/2}-29364_{31/2}$	−54
5042.537	10	*MB*	19825.759	$11742^{\circ}_{51/2}-31568_{41/2}$	−14	5090.878	40	*MB*	19637.503	$13659^{\circ}_{41/2}-33296_{41/2}$	28
5044.023	400	*MB*	19819.918	$9771_{71/2}-29591^{\circ}_{61/2}$	1	5091.182	5	*MB*	19636.331	$7878^{\circ}_{31/2}-27514_{31/2}$	0
5044.547	10	*MB*	19817.859	$8531_{31/2}-28349^{\circ}_{31/2}$	−44	5092.334	2	*MB*	19631.889	$14276_{51/2}-33908^{\circ}_{41/2}$	−5
5044.915	1	*MB*	19816.414	$5283^{\circ}_{01/2}-25099_{11/2}$	−38	5092.706	2	*MB*	19630.455	$4523^{\circ}_{41/2}-24153_{31/2}$	22
5045.126	7	*MB*	19815.585	$9634^{\circ}_{11/2}-29449_{11/2}$	−6	5093.168	8	*MB*	19628.674	$13256_{11/2}-32885^{\circ}_{21/2}$	8
5046.942	8	*MB*	19808.455	$5010^{\circ}_{21/2}-24819_{31/2}$	−8	5093.645	20	*MB*	19626.836	$10798^{\circ}_{21/2}-30425_{21/2}$	42
5048.175	2	*MB*	19803.617	$15822_{31/2}-35625^{\circ}_{31/2}$	−23	5094.520	1	*MB*	19623.465	$17300^{\circ}_{31/2}-36923_{41/2}$	−13
5049.061	5	*MB*	19800.142	$10869_{41/2}-30669^{\circ}_{41/2}$	−18	5095.726	10	*MB*	19618.821	$11949^{\circ}_{31/2}-31568_{41/2}$	−8
5049.708	7	*MB*	19797.605	$8927^{\circ}_{51/2}-28725_{41/2}$	−28	5096.163	4	*MB*	19617.138	$13268_{21/2}-32885^{\circ}_{21/2}$	−10
5050.555	10	*MB*	19794.285	$12057^{\circ}_{21/2}-31851_{21/2}$	−4	5096.698	2	*MB*	19615.079	$16192^{\circ}_{41/2}-35807_{41/2}$	−22
5053.055	10	*MB*	19784.492	$5969^{\circ}_{51/2}-25753_{61/2}$	7	5098.186	2	*MB*	19609.354	$11949^{\circ}_{31/2}-31558_{31/2}$	−82
5054.593	2	*MB*	19778.472	$12456_{31/2}-32235^{\circ}_{31/2}$	−20	5098.614	3	*MB*	19607.708	$7233^{\circ}_{51/2}-26841_{41/2}$	−48
5054.795	3	*MB*	19777.681	$10924^{\circ}_{41/2}-30702_{41/2}$	−52	5102.983	2	*MB*	19590.921		
5057.379	5	*MB*	19767.577			5104.337	12	*MB*	19585.724	$9778^{\circ}_{21/2}-29364_{31/2}$	−29
5057.694	15	*MB*	19766.345	$15859_{41/2}-35625^{\circ}_{31/2}$	9	5105.231	40	*MB*	19582.295	$7259^{\circ}_{31/2}-26841_{41/2}$	−13
5059.438	20	*MB*	19759.532	$9269^{\circ}_{01/2}-29029_{11/2}$	5	5105.556	12	*MB*	19581.048	$4201^{\circ}_{11/2}-23782_{21/2}$	−49
5061.355	6	*MB*	19752.048	$4910^{\circ}_{51/2}-24663_{41/2}$	−43	5105.852	15	*MB*	19579.913	$15281_{61/2}-34861^{\circ}_{51/2}$	−10
5062.809	4	*MB*	19746.375	$13117_{41/2}-32864^{\circ}_{51/2}$	20	5106.223	8	*MB*	19578.490	$10314_{41/2}-29892^{\circ}_{31/2}$	−24
5063.564	2	*MB*				5107.951	8	*MB*	19571.867	$12365^{\circ}_{41/2}-31937_{31/2}$	20
5065.725	20	*MB*	19735.009	$11340^{\circ}_{31/2}-31075_{41/2}$	4	5110.096	4	*MB*	19563.652	$13515^{\circ}_{31/2}-33079_{31/2}$	−6
5067.165	60	*MB*	19729.401	$12762^{\circ}_{41/2}-32492_{51/2}$	4	5110.925	1	*MB*	19560.479	$14315^{\circ}_{01/2}-33876_{11/2}$	34
5067.658	2	*MB*	19727.481	$15134_{41/2}-34861^{\circ}_{51/2}$	5	5112.232	8	*MB*	19555.478	$6389^{\circ}_{41/2}-25945_{31/2}$	24
5069.302	10	*MB*	19721.084	$17475^{\circ}_{41/2}-37196_{41/2}$	−31	5112.543	15	*MB*	19554.288	$8280^{\circ}_{21/2}-27835_{11/2}$	1
5070.271	2	*MB*	19717.315	$11325^{\circ}_{21/2}-31043_{21/2}$	−13	5115.138	15	*MB*	19544.368	$14049_{11/2}-33594^{\circ}_{21/2}$	−22
5072.073	7	*MB*	19710.310	$5651^{\circ}_{51/2}-25361_{41/2}$	−6	5116.329	10	*MB*	19539.819	$10454^{\circ}_{11/2}-29994_{21/2}$	50
5072.408	2	*MB*	19709.008	$12057^{\circ}_{21/2}-31766_{11/2}$	6	5116.537	3	*MB*	19539.024	$7278^{\circ}_{11/2}-26817_{21/2}$	11
5072.921	20	*MB*	19707.015	$8927^{\circ}_{51/2}-28634_{51/2}$	13	5117.168	300	*MB*	19536.615	$11309_{71/2}-30846^{\circ}_{71/2}$	5
5074.594	30	*MB*	19700.518	$5118^{\circ}_{21/2}-24819_{31/2}$	−9	5117.948	40	*MB*	19533.637	$10058_{61/2}-29591^{\circ}_{61/2}$	−9
5075.353	500	*MB*	19697.572	$8278_{51/2}-27975^{\circ}_{41/2}$	7	5118.347	12	*MB*	19532.115	$10274^{\circ}_{31/2}-29807_{31/2}$	8

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5118.758	10	*MB*	19530.546	$8280°_{2\,1/2}-27811_{3\,1/2}$	−3	5182.584	2	*MB*	19290.021	$7061°_{0\,1/2}-26351_{0\,1/2}$	−51
				$1410°_{4\,1/2}-20940_{3\,1/2}$	12	5183.743	20	*MB*	19285.709	$11949°_{3\,1/2}-31234_{2\,1/2}$	20
5119.730	15	*MB*	19526.839	$9198°_{3\,1/2}-28725_{4\,1/2}$	17	5187.459	800b	*MB*	19271.894	$9771_{7\,1/2}-29043°_{6\,1/2}$	−3
5121.649	2	*MB*	19519.522	$10274°_{3\,1/2}-29794_{3\,1/2}$	−23					$3995°_{3\,1/2}-23267_{3\,1/2}$	3
5122.894	4	*MB*	19514.779			5190.604	3	*MB*	19260.217	$13784°_{1\,1/2}-33045_{2\,1/2}$	−43
5122.997	1	*MB*				5191.634	300	*MB*	19256.396	$7011_{4\,1/2}-26268°_{3\,1/2}$	−2
5124.138	10	*MB*	19510.041	$27187_{3\,1/2}-46697°_{4\,1/2}$	4	5192.094	10	*MB*	19254.690	$13117_{4\,1/2}-32372°_{4\,1/2}$	−8
5125.877	8	*MB*	19503.422	$7746°_{2\,1/2}-27249_{2\,1/2}$	−61	5194.072	12	*MB*	19247.357	$8131_{4\,1/2}-27378°_{5\,1/2}$	59
5126.156	10	*MB*	19502.361	$9778°_{2\,1/2}-29281_{2\,1/2}$	−26	5195.241	2	*MB*	19243.026		
5128.749	8	*MB*	19492.501	$16133_{2\,1/2}-35625°_{3\,1/2}$	−4	5195.747	5	*MB*	19241.152	$10924°_{4\,1/2}-30166_{3\,1/2}$	−28
5129.794	4	*MB*	19488.530	$11340°_{3\,1/2}-30829_{3\,1/2}$	4	5197.049	2	*MB*	19236.332		
5131.187	6	*MB*	19483.239	$0°_{3\,1/2}-19483_{2\,1/2}$	14	5197.757	12	*MB*	19233.712	$8280°_{2\,1/2}-27514_{3\,1/2}$	−1
5133.071	1	*MB*	19476.088	$15822_{3\,1/2}-35298°_{2\,1/2}$	−42	5203.616	15	*MB*	19212.056		
5133.801	3	*MB*	19473.319	$16152_{3\,1/2}-35625°_{3\,1/2}$	−3	5205.506	80	*MB*	19205.081	$10058_{6\,1/2}-29263°_{5\,1/2}$	−30
5136.795	5	*MB*	19461.969	$13527_{4\,1/2}-32989°_{3\,1/2}$	−9	5205.960	5	*MB*	19203.406	$13659°_{4\,1/2}-32862_{3\,1/2}$	−31
5138.668	5	*MB*	19454.876	$3745°_{1\,1/2}-23200_{2\,1/2}$	20	5206.600	4	*MB*	19201.045	$7278°_{1\,1/2}-26479_{1\,1/2}$	42
5141.745	8	*MB*	19443.233	$9723°_{4\,1/2}-29166_{4\,1/2}$	−28	5208.108	4	*MB*	19195.486	$10798°_{2\,1/2}-29994_{2\,1/2}$	0
5142.214	12	*MB*	19441.460	$18147°_{2\,1/2}-37588_{3\,1/2}$	−7	5210.340	60	*MB*	19187.263	$7713°_{4\,1/2}-26900_{3\,1/2}$	−1
5142.902	2	*MB*	19438.859			5212.933	2	*MB*	19177.719	$12057°_{2\,1/2}-31234_{2\,1/2}$	−52
5143.561	8	*MB*	19436.369	$10314_{4\,1/2}-29750°_{5\,1/2}$	−15	5214.719	6	*MB*	19171.151	$16454_{2\,1/2}-35625°_{3\,1/2}$	6
5143.828	8	*MB*	19435.360	$12762°_{4\,1/2}-32197_{4\,1/2}$	19	5215.692	15	*MB*	19167.574	$15859_{4\,1/2}-35026°_{4\,1/2}$	−6
5144.848	20	*MB*	19431.506	$7818°_{1\,1/2}-27249_{2\,1/2}$	−15	5216.234	3	*MB*	19165.583	$10641°_{2\,1/2}-29807_{3\,1/2}$	−52
5145.162	40	*MB*	19430.321	$8896_{5\,1/2}-28327°_{5\,1/2}$	−20	5216.702	15	*MB*	19163.863	$6517°_{2\,1/2}-25681_{1\,1/2}$	−5
5146.106	1	*MB*	19426.756			5217.715	12	*MB*	19160.144	$6521°_{1\,1/2}-25681_{1\,1/2}$	−12
5146.901	12	*MB*	19423.756	$10641°_{2\,1/2}-30065_{3\,1/2}$	34	5218.201	6	*MB*	19158.358		
5147.570	200	*MB*	19421.231	$10314_{4\,1/2}-29735°_{4\,1/2}$	−19	5219.221	3	*MB*	19154.614	$13217_{3\,1/2}-32372°_{4\,1/2}$	−30
5147.917	7	*MB*	19419.922	$11949°_{3\,1/2}-31369_{2\,1/2}$	19	5220.221	12	*MB*	19150.945	$13675_{2\,1/2}-32826°_{1\,1/2}$	0
5148.548	30	*MB*	19417.542	$11007°_{1\,1/2}-30425_{2\,1/2}$	−7	5220.884	6	*MB*	19148.513	$14387_{4\,1/2}-33535°_{3\,1/2}$	−10
5150.628	4	*MB*	19409.701	$8402°_{3\,1/2}-27812_{2\,1/2}$	−28	5221.393	8	*MB*	19146.646	$8804°_{4\,1/2}-27950_{5\,1/2}$	−20
5150.859	12	*MB*	19408.830	$8402°_{3\,1/2}-27811_{3\,1/2}$	3	5222.242	8	*MB*	19143.534	$5675°_{4\,1/2}-24819_{3\,1/2}$	−36
5154.402	50	*MB*	19395.490	$3508°_{0\,1/2}-22903_{1\,1/2}$	−13	5224.181	2	*MB*	19136.429	$9198°_{3\,1/2}-28334_{4\,1/2}$	0
				$6549°_{2\,1/2}-25945_{3\,1/2}$	2	5225.202	1	*MB*	19132.689	$28297_{3\,1/2}-47430°_{3\,1/2}$	−21
5155.308	5	*MB*	19392.081	$11759_{5\,1/2}-31151°_{5\,1/2}$	14	5225.505	25	*MB*	19131.580	$6549°_{2\,1/2}-25681_{1\,1/2}$	0
5155.370	10	*MB*	19391.848	$11454_{6\,1/2}-30846°_{7\,1/2}$	−32	5226.401	50	*MB*	19128.300	$7713°_{4\,1/2}-26841_{4\,1/2}$	5
5157.205	15	*MB*	19384.948	$12466°_{1\,1/2}-31851_{2\,1/2}$	−18	5226.910	20	*MB*	19126.437	$11949°_{3\,1/2}-31075_{4\,1/2}$	24
5158.031	10	*MB*	19381.844	$5437°_{3\,1/2}-24819_{3\,1/2}$	−67	5232.548	5	*MB*	19105.829	$10684°_{0\,1/2}-29790_{0\,1/2}$	0
5160.092	1	*MB*	19374.103	$4266°_{3\,1/2}-23640_{4\,1/2}$	−62	5232.922	300	*MB*	19104.464	$10646_{5\,1/2}-29750°_{5\,1/2}$	−12
5160.831	15	*MB*	19371.328	$7878°_{3\,1/2}-27249_{2\,1/2}$	−12	5233.285	4	*MB*	19103.139	$5716°_{3\,1/2}-24819_{3\,1/2}$	21
5161.842	8	*MB*	19367.534	$10798°_{2\,1/2}-30166_{3\,1/2}$	33	5234.017	120	*MB*	19100.467	$8278_{5\,1/2}-27378°_{5\,1/2}$	6
5163.310	25	*MB*	19362.028	$11340°_{3\,1/2}-30702_{4\,1/2}$	16	5234.268	6	*MB*	19099.551	$11325°_{2\,1/2}-30425_{2\,1/2}$	−16
5163.548	2	*MB*	19361.135	$10088°_{1\,1/2}-29449_{1\,1/2}$	−2	5235.800	50	*MB*	19093.962	$11949°_{3\,1/2}-31043_{2\,1/2}$	42
5168.669	10	*MB*	19341.953	$14252_{3\,1/2}-33594°_{2\,1/2}$	−20	5237.069	100	*MB*	19089.336	$10646_{5\,1/2}-29735°_{4\,1/2}$	−6
5170.967	5	*MB*	19333.358	$11742°_{5\,1/2}-31075_{4\,1/2}$	0	5237.219	15	*MB*	19088.789	$13527_{4\,1/2}-32616°_{4\,1/2}$	9
5173.712	15	*MB*	19323.100	$4459°_{3\,1/2}-23782_{2\,1/2}$	−18	5239.271	20	*MB*	19081.313	$14963°_{5\,1/2}-34044_{4\,1/2}$	−27
5174.879	4	*MB*	19318.743	$7522°_{5\,1/2}-26841_{4\,1/2}$	−19	5239.479	4	*MB*	19080.555	$14827_{3\,1/2}-33908°_{4\,1/2}$	−14
5176.864	1	*MB*	19311.335	$11325°_{2\,1/2}-30637_{2\,1/2}$	−40	5239.845	25	*MB*	19079.223	$9316_{3\,1/2}-28396°_{2\,1/2}$	−14
5177.576	5	*MB*	19308.679	$7878°_{3\,1/2}-27187_{3\,1/2}$	−39	5239.937	3	*MB*	19078.888	$8896_{5\,1/2}-27975°_{4\,1/2}$	−1
5178.287	4	*MB*	19306.028	$13012°_{2\,1/2}-32318_{3\,1/2}$	−51	5241.333	15	*MB*	19073.806	$8175°_{2\,1/2}-27249_{2\,1/2}$	0
5179.481	20	*MB*	19301.578	$8131_{4\,1/2}-27432°_{4\,1/2}$	13	5241.782	20	*MB*	19072.172	$10820_{2\,1/2}-29892°_{3\,1/2}$	−18
5179.917	2	*MB*	19299.953	$10820_{2\,1/2}-30120°_{1\,1/2}$	33	5242.210	2	*MB*	19070.615	$14481°_{2\,1/2}-33552_{2\,1/2}$	−36

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5249.915	8	*MB*	19042.627	$12704_{11/2}-31747°_{11/2}$	18	5319.953	10	*MB*	18791.931	$27905_{41/2}-46697°_{41/2}$	4
5252.107	12	*MB*	19034.679	$5118°_{21/2}-24153_{31/2}$	20	5321.159	4	*MB*	18787.672	$14097_{31/2}-32885°_{21/2}$	0
5252.381	3	*MB*	19033.686	$12097_{31/2}-31130°_{31/2}$	−20	5321.971	2	*MB*	18784.805		
5252.668	150	*MB*	19032.646	$9316_{31/2}-28349°_{31/2}$	−23	5322.093	3	*MB*	18784.374	$8402°_{31/2}-27187_{31/2}$	−4
5252.808	30	*MB*	19032.139	$10703_{41/2}-29735°_{41/2}$	31	5322.482	3	*MB*	18783.002	$12260°_{31/2}-31043_{21/2}$	−19
5253.522	10	*MB*	19029.553	$16268_{11/2}-35298°_{21/2}$	36	5322.632	1	*MB*	18782.472	$11007°_{11/2}-29790_{01/2}$	1
5255.215	6	*MB*	19023.422	$8927°_{51/2}-27950_{51/2}$	45	5323.582	10	*MB*	18779.121	$8927°_{51/2}-27706_{61/2}$	4
5258.447	60	*MB*	19011.730	$5651°_{51/2}-24663_{41/2}$	32	5323.797	4	*MB*	18778.362	$11387°_{31/2}-30166_{31/2}$	36
5259.353	1	*MB*	19008.455	$10798°_{21/2}-29807_{31/2}$	−67	5324.199	3	*MB*	18776.944	$14049_{11/2}-32826°_{11/2}$	38
5259.702	20	*MB*	19007.194	$8927°_{51/2}-27934_{41/2}$	70	5324.985	2	*MB*	18774.173	$15134_{41/2}-33908°_{41/2}$	30
5261.197	4	*MB*	19001.793	$9723°_{41/2}-28725_{41/2}$	−19	5325.741	6	*MB*	18771.508	$4737°_{21/2}-23508_{11/2}$	1
5261.620	15	*MB*	19000.265	$5819°_{41/2}-24819_{31/2}$	44	5326.607	6	*MB*	18768.456	$12466°_{11/2}-31234_{21/2}$	7
5265.676	250	*WA*	18985.630	$10058_{61/2}-29043°_{61/2}$	2	5327.490	8	*MB*	18765.345	$10684°_{01/2}-29449_{11/2}$	8
5267.902	10	*MB*	18977.607	$8927°_{51/2}-27905_{41/2}$	−35	5327.858	10	*MB*	18764.049	$14276_{51/2}-33040°_{41/2}$	−5
5268.390	12	*MB*	18975.849	$12762°_{41/2}-31738_{51/2}$	7	5328.430	2	*MB*			
5270.869	10	*MB*	18966.925	$13268_{21/2}-32235°_{31/2}$	−95	5328.645	6	*MB*	18761.278	$16159°_{31/2}-34920_{31/2}$	26
5273.345	15	*MB*	18958.020	$13758°_{11/2}-32716_{21/2}$	43	5330.544	400	*MB*	18754.594	$7011_{41/2}-25766°_{41/2}$	43
5273.914	20	*MB*	18955.974			5330.876	8	*MB*	18753.426	$11949°_{31/2}-30702_{41/2}$	6
5274.230	700	*MB*	18954.838	$8423_{61/2}-27378°_{51/2}$	−4	5332.208	10	*MB*	18748.742	$13217_{31/2}-31966°_{21/2}$	−29
5275.115	4	*MB*	18951.658	$9778°_{21/2}-28730_{31/2}$	−67					$13758°_{11/2}-32507_{11/2}$	−29
5275.814	70	*MB*	18949.147	$10314_{41/2}-29263°_{51/2}$	−28	5332.754	6	*MB*	18746.822	$18147°_{21/2}-36893_{31/2}$	57
5276.718	20	*MB*	18945.901	$19946°_{11/2}-38892_{01/2}$	−31	5333.882	10	*MB*	18742.857	$7202°_{21/2}-25945_{31/2}$	−9
5278.164	8	*MB*	18940.711	$10088°_{11/2}-29029_{11/2}$	−1	5335.554	3	*MB*	18736.984	$14252_{31/2}-32989°_{31/2}$	−55
5278.824	25	*MB*	18938.343	$4844°_{11/2}-23782_{21/2}$	−3	5336.473	3	*MB*	18733.757	$7746°_{21/2}-26479_{11/2}$	17
5281.711	15	*MB*	18927.991	$14481°_{21/2}-33409_{31/2}$	24	5337.668	4	*MB*	18729.563	$4910°_{51/2}-23640_{41/2}$	−36
5283.386	20	*MB*	18921.990	$9053_{31/2}-27975°_{41/2}$	1	5339.238	7	*MB*	18724.056	$14387_{41/2}-33111°_{31/2}$	5
5284.707	3	*MB*	18917.261			5339.423	10	*MB*	18723.407	$6638°_{41/2}-25361_{41/2}$	−8
5286.202	1	*MB*	18911.911	$19920°_{31/2}-38832_{21/2}$	15	5342.921	4	*MB*	18711.149	$9634°_{11/2}-28345_{01/2}$	19
5286.392	10	*MB*	18911.231	$9723°_{41/2}-28634_{51/2}$	50	5343.238	20	*MB*	18710.039	$13256_{11/2}-31966°_{21/2}$	−7
5286.681	12	*MB*	18910.197	$11759_{51/2}-30669°_{41/2}$	−37					$19138°_{11/2}-37848_{21/2}$	24
5286.955	3	*MB*	18909.217	$12704_{11/2}-31613°_{01/2}$	18	5343.816	25	*MB*	18708.016	$14827_{31/2}-33535°_{31/2}$	3
5287.658	8	*MB*	18906.703	$9778°_{21/2}-28685_{21/2}$	−68					$13527_{41/2}-32235°_{31/2}$	16
5293.404	8	*MB*	18886.180	$19946°_{11/2}-38832_{21/2}$	39	5344.142	4	*MB*	18706.874	$9198°_{31/2}-27905_{41/2}$	43
5294.855	7	*MB*	18881.005	$10869_{41/2}-29750°_{51/2}$	0	5345.065	10	*MB*	18703.644	$9634°_{11/2}-28337_{21/2}$	16
5295.139	6	*MB*	18879.992	$11949°_{31/2}-30829_{31/2}$	57	5347.835	50	*MB*	18693.956	$5969°_{51/2}-24663_{41/2}$	−89
5298.045	10	*MB*	18869.636	$10924°_{41/2}-29794_{31/2}$	−4	5350.025	4	*MB*	18686.304	$7259°_{31/2}-25945_{31/2}$	−16
5301.257	10	*MB*	18858.203	$11387°_{31/2}-30245_{41/2}$	57	5352.554	7	*MB*	18677.475	$11387°_{31/2}-30065_{31/2}$	42
5303.986	20	*MB*	18848.501	$14963°_{51/2}-33811_{41/2}$	34	5353.529	1000	*MB*	18674.074	$7092_{51/2}-25766°_{41/2}$	−16
5304.384	12	*MB*	18847.087	$8402°_{31/2}-27249_{21/2}$	86	5354.566	15	*MB*	18670.457	$9725_{31/2}-28396°_{21/2}$	40
5305.331	12	*MB*	18843.722	$16454_{21/2}-35298°_{21/2}$	88	5355.864	4	*MB*	18665.932	$19138°_{11/2}-37804_{11/2}$	33
										$11007°_{11/2}-29673_{21/2}$	−38
5305.758	7	*MB*	18842.206	$12365°_{41/2}-31207_{31/2}$	85						
5306.996	6	*MB*	18837.811	$19136°_{21/2}-37973_{31/2}$	59	5356.108	3	*MB*	18665.082	$17851°_{01/2}-36516_{11/2}$	84
5313.010	8	*MB*	18816.487			5356.362	10	*MB*	18664.197	$5118°_{21/2}-23782_{21/2}$	12
5313.080	6	*MB*	18816.239	$12751°_{51/2}-31568_{41/2}$	3					$4844°_{11/2}-23508_{11/2}$	−38
5313.282	9	*MB*	18815.524	$12260°_{31/2}-31075_{41/2}$	9	5357.937	15	*MB*	18658.710	$9316_{31/2}-27975°_{41/2}$	4
										$8774_{41/2}-27432°_{41/2}$	−7
5313.691	10	*MB*	18814.076								
5315.555	4	*MB*	18807.479	$4459°_{31/2}-23267_{31/2}$	0	5359.503	50	*MB*	18653.259	$14387_{41/2}-33040°_{41/2}$	18
5317.036	2	*MB*	18802.240	$13515°_{31/2}-32318_{31/2}$	−81	5360.071	6	*MB*	18651.282	$10798°_{21/2}-29449_{11/2}$	59
5318.121	15	*MB*	18798.404	$13436_{21/2}-32235°_{31/2}$	23	5367.438	7	*MB*	18625.683	$17000_{31/2}-35625°_{31/2}$	−9
5318.830	5	*MB*	18795.898	$14739_{21/2}-33535°_{31/2}$	23	5367.970	15	*MB*	18623.837	$9725_{31/2}-28349°_{31/2}$	−11

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5368.776	8	*MB*	18621.041	$19920°_{3\,1/2}-38541_{4\,1/2}$	−18	5438.940	15	*MB*	18380.826	$14481°_{2\,1/2}-32862_{3\,1/2}$	−10
5369.156	15	*MB*	18619.723	$7061°_{0\,1/2}-25681_{1\,1/2}$	73	5439.427	4	*MB*	18379.181	$9053_{3\,1/2}-27432°_{4\,1/2}$	28
5369.866	8	*MB*	18617.261	$10646_{5\,1/2}-29263°_{5\,1/2}$	−6	5439.939	4	*MB*	18377.451		
5370.274	10	*MB*	18615.847	$10114°_{2\,1/2}-28730_{3\,1/2}$	18	5441.731	40	*MB*	18371.399	$14739_{2\,1/2}-33111°_{3\,1/2}$	−2
5370.780	6	*MB*	18614.093	$9198°_{3\,1/2}-27812_{2\,1/2}$	21	5442.203	3	*MB*	18369.806	$18147°_{2\,1/2}-36516_{1\,1/2}$	13
5374.237	15	*MB*	18602.119	$14387_{4\,1/2}-32989°_{3\,1/2}$	14	5442.658	4	*MB*	18368.270	$12057°_{2\,1/2}-30425_{2\,1/2}$	28
5375.674	4	*MB*	18597.147	$10088°_{1\,1/2}-28685_{2\,1/2}$	29	5445.999	12	*MB*	18357.002	$13012°_{2\,1/2}-31369_{2\,1/2}$	4
5378.322	50	*MB*	18587.991	$14276_{5\,1/2}-32864°_{5\,1/2}$	11	5446.925	4	*MB*	18353.881	$13784°_{1\,1/2}-32138_{2\,1/2}$	17
5380.267	5	*MB*	18581.271	$4322°_{2\,1/2}-22903_{1\,1/2}$	6	5447.157	2	*MB*	18353.099		
5381.585	3	*MB*	18576.720	$12466°_{1\,1/2}-31043_{2\,1/2}$	41	5449.403	7	*MB*	18345.535	$5437°_{3\,1/2}-23782_{2\,1/2}$	−30
5382.340	4	*MB*	18574.115	$9723°_{4\,1/2}-28297_{3\,1/2}$	−22	5449.581	10	*MB*	18344.936	$10684°_{0\,1/2}-29029_{1\,1/2}$	24
5382.828	12	*MB*	18572.431	$12097_{3\,1/2}-30669°_{4\,1/2}$	5	5451.132	25	*MB*	18339.716	$14276_{5\,1/2}-32616°_{4\,1/2}$	−4
5382.992	5	*MB*	18571.865	$1410°_{4\,1/2}-19982_{4\,1/2}$	−17	5453.029	4	*MB*	18333.336		
5383.287	2	*MB*	18570.847	$10114°_{2\,1/2}-28685_{2\,1/2}$	−27	5453.259	3	*MB*	18332.563	$17475°_{4\,1/2}-35807_{4\,1/2}$	18
5383.446	5	*MB*	18570.299			5454.887	3	*MB*	18327.092	$12762°_{4\,1/2}-31089_{5\,1/2}$	2
5383.812	7	*MB*	18569.036	$12260°_{3\,1/2}-30829_{3\,1/2}$	1	5458.104	50	*MB*	18316.290	$16545_{5\,1/2}-34861°_{5\,1/2}$	33
5384.031	12b	*MB*	18568.281	$14963°_{5\,1/2}-33531_{6\,1/2}$	−6					$9198°_{3\,1/2}-27514_{3\,1/2}$	−43
				$11340°_{3\,1/2}-29908_{4\,1/2}$	−24	5459.200	100	*MB*	18312.613	$13027_{6\,1/2}-31340°_{6\,1/2}$	−21
5384.869	10	*MB*	18565.391	$30702_{4\,1/2}-49267°_{4\,1/2}$	20					$26817_{2\,1/2}-45130°_{2\,1/2}$	20
				$9269°_{0\,1/2}-27835_{1\,1/2}$	−15	5459.812	7	*MB*	18310.560		
5386.259	6	*MB*	18560.601			5459.901	7	*MB*	18310.262	$8169°_{1\,1/2}-26479_{1\,1/2}$	34
5386.770	120b	*MB*	18558.840	$9778°_{2\,1/2}-28337_{2\,1/2}$	12	5460.056	20	*MB*	18309.742	$4266°_{3\,1/2}-22576_{2\,1/2}$	−30
5389.452	8	*MB*	18549.604	$6549°_{2\,1/2}-25099_{1\,1/2}$	31	5461.791	2	*MB*	18303.926		
5390.524	10	*MB*	18545.915	$7722_{2\,1/2}-26268°_{3\,1/2}$	−2	5462.188	7	*MB*	18302.595	$7059°_{4\,1/2}-25361_{4\,1/2}$	−6
5393.393	600	*MB*	18536.050	$8896_{5\,1/2}-27432°_{4\,1/2}$	−2	5463.238	8	*MB*	18299.078	$10035°_{5\,1/2}-28334_{4\,1/2}$	33
5396.662	6	*MB*	18524.822	$22576_{2\,1/2}-41100°_{2\,1/2}$	60	5464.206	100	*MB*	18295.836	$11454_{6\,1/2}-29750°_{5\,1/2}$	−9
5398.504	40	*MB*	18518.502	$9778°_{2\,1/2}-28297_{3\,1/2}$	15	5465.636	4	*MB*	18291.049	$13675_{2\,1/2}-31966°_{2\,1/2}$	24
5402.836	4	*MB*	18503.653	$11742°_{5\,1/2}-30245_{4\,1/2}$	21	5468.371	200	*MB*	18281.901	$11309_{7\,1/2}-29591°_{6\,1/2}$	0
5406.675	25	*MB*	18490.515	$13256_{1\,1/2}-31747°_{1\,1/2}$	−26	5469.443	4	*MB*	18278.318	$13659°_{4\,1/2}-31937_{3\,1/2}$	−5
5409.232	600	*MB*	18481.775	$8896_{5\,1/2}-27378°_{5\,1/2}$	−10	5470.465	15	*MB*	18274.903	$14097_{3\,1/2}-32372°_{4\,1/2}$	−23
5410.049	40	*MB*	18478.983	$13268_{2\,1/2}-31747°_{1\,1/2}$	−41	5471.009	5	*MB*	18273.086	$6389°_{4\,1/2}-24663_{4\,1/2}$	−26
				$7202°_{2\,1/2}-25681_{1\,1/2}$	25	5471.969	10	*MB*	18269.880		
5413.049	12	*MB*	18468.742	$11325°_{2\,1/2}-29794_{3\,1/2}$	6	5472.101	4	*MB*	18269.440	$6549°_{2\,1/2}-24819_{3\,1/2}$	14
5413.716	15	*MB*	18466.467	$11340°_{3\,1/2}-29807_{3\,1/2}$	−12	5472.290	300	*MB*	18268.809	$10058_{6\,1/2}-28327°_{5\,1/2}$	−35
5417.826	40	*MB*	18452.458	$19136°_{2\,1/2}-37588_{3\,1/2}$	9	5475.931	2	*MB*	18256.662	$10088°_{1\,1/2}-28345_{0\,1/2}$	−13
				$8927°_{5\,1/2}-27379_{5\,1/2}$	23						
						5477.969	4	*MB*	18249.870	$9725_{3\,1/2}-27975°_{4\,1/2}$	−15
5421.876	4	*MB*	18438.675	$8402°_{3\,1/2}-26841_{4\,1/2}$	−40	5479.806	7	*MB*	18243.752	$13503_{0\,1/2}-31747°_{1\,1/2}$	17
5422.150	7	*MB*	18437.743			5480.631	8	*MB*	18241.006	$17475°_{4\,1/2}-35716_{5\,1/2}$	−53
5424.150	8	*MB*	18430.945			5481.302	40	*MB*	18238.773	$14625_{5\,1/2}-32864°_{5\,1/2}$	−1
5424.482	7	*MB*	18429.817	$22290_{1\,1/2}-40720°_{1\,1/2}$	10	5483.672	8	*MB*	18230.890	$7522°_{5\,1/2}-25753_{6\,1/2}$	19
5424.608	8	*MB*	18429.389	$6389°_{4\,1/2}-24819_{3\,1/2}$	−2	5484.693	6	*MB*	18227.496	$9723°_{4\,1/2}-27950_{5\,1/2}$	−59
5425.794	12	*MB*	18425.360	$7341_{5\,1/2}-25766°_{4\,1/2}$	13	5484.874	20	*MB*	18226.895	$13117_{4\,1/2}-31344°_{3\,1/2}$	−10
5426.848	10	*MB*	18421.782	$13515°_{3\,1/2}-31937_{3\,1/2}$	−17	5486.061	20	*MB*	18222.951	$10114°_{2\,1/2}-28337_{2\,1/2}$	20
5427.564	30	*MB*	18419.352	$11387°_{3\,1/2}-29807_{3\,1/2}$	5	5487.899	7	*MB*	18216.848	$11949°_{3\,1/2}-30166_{3\,1/2}$	−19
5428.889	15	*MB*	18414.856	$14625_{5\,1/2}-33040°_{4\,1/2}$	6	5488.886	6	*MB*	18213.572	$19920°_{3\,1/2}-38134_{4\,1/2}$	−14
5432.512	10	*MB*	18402.575	$7278°_{1\,1/2}-25681_{1\,1/2}$	9	5489.767	5	*MB*	18210.650	$5942°_{3\,1/2}-24153_{3\,1/2}$	−17
5433.924	20	*MB*	18397.793	$10646_{5\,1/2}-29043°_{6\,1/2}$	10	5493.486	3	*MB*	18198.321	$7293°_{6\,1/2}-25492_{5\,1/2}$	8
5435.104	8	*MB*	18393.799	$10869_{4\,1/2}-29263°_{5\,1/2}$	2	5496.431	2	*MB*	18188.571	$5964°_{3\,1/2}-24153_{3\,1/2}$	1
5435.244	7	*MB*	18393.325	$0°_{3\,1/2}-18393_{3\,1/2}$	−1	5498.470	4	*MB*	18181.826	$9723°_{4\,1/2}-27905_{4\,1/2}$	4
5435.423	1	*MB*	18392.720	$4511°_{2\,1/2}-22903_{1\,1/2}$	3	5498.704	4	*MB*	18181.052	$6638°_{4\,1/2}-24819_{3\,1/2}$	−23

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TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5501.810	5	*MB*	18170.788	$12466°_{1/2}-30637_{2/2}$	62	5577.145	6	*MB*	17925.343	$17300°_{3/2}-35225_{2/2}$	−2
5503.481	8	*MB*	18165.271	$12260°_{3/2}-30425_{2/2}$	10	5577.512	6	*MB*	17924.164		
5504.592	20	*MB*	18161.605	$14827_{3/2}-32989°_{3/2}$	10	5580.661	30	*MB*	17914.050	$27950_{5/2}-45864°_{5/2}$	−8
5505.606	10	*MB*	18158.260	$27706_{6/2}-45864°_{5/2}$	−58	5582.548	60	*MB*	17907.995	$13436_{2/2}-31344°_{3/2}$	25
5505.764	4	*MB*	18157.739	$14727_{1/2}-32885°_{2/2}$	−87	5583.176	10	*MB*	17905.980	$12260°_{3/2}-30166_{3/2}$	12
5505.942	15	*MB*	18157.152	$7202°_{2/2}-25359_{2/2}$	−4	5587.192	2	*MB*	17893.110	$5010°_{2/2}-22903_{1/2}$	6
5508.556	7	*MB*	18148.536	$5118°_{2/2}-23267_{3/2}$	−8	5588.760	15	*MB*	17888.090		
5509.444	25	*MB*	18145.611	$14739_{2/2}-32885°_{2/2}$	5	5590.180	15	*MB*	17883.546	$10454°_{1/2}-28337_{2/2}$	4
5512.049	500b	*MB*	18137.035	$8131_{4/2}-26268°_{3/2}$	49	5594.464	12	*MB*	17869.852		
5512.384	25	*MB*	18135.933	$16159°_{3/2}-34295_{4/2}$	19	5594.719	50	*MB*	17869.037	$14097_{3/2}-31966°_{2/2}$	−16
5513.118	40	*MB*	18133.518	$11458_{5/2}-29591°_{6/2}$	−1	5596.681	30	*MB*	17862.773	$13268_{2/2}-31130°_{3/2}$	8
5514.776	3	*MB*	18128.067	$7233°_{5/2}-25361_{4/2}$	20	5599.061	50	*MB*	17855.180	$15134_{4/2}-32989°_{3/2}$	13
5516.085	60	*MB*	18123.765	$13027_{6/2}-31151°_{5/2}$	−10	5599.684	2	*MB*	17853.194	$13515°_{3/2}-31369_{2/2}$	−45
5518.490	100	*MB*	18115.866	$9316_{3/2}-27432°_{4/2}$	−3	5600.182	15	*MB*	17851.606	$12097_{3/2}-29948°_{2/2}$	−31
5520.180	30	*MB*	18110.320	$13503_{0/2}-31613°_{0/2}$	−4	5602.150	8	*MB*	17845.335	$11949°_{3/2}-29794_{3/2}$	7
5521.842	40	*MB*	18104.870	$15803_{4/2}-33908°_{4/2}$	−12	5603.765	5	*MB*	17840.192	$5942°_{3/2}-23782_{2/2}$	0
5523.591	15	*MB*	18099.137	$14727_{1/2}-32826°_{1/2}$	9	5604.124	6	*MB*	17839.049	$14963°_{5/2}-32802_{5/2}$	−15
5524.447	25	*MB*	18096.332	$14276_{5/2}-32372°_{4/2}$	10					$7522°_{5/2}-25361_{4/2}$	−2
5526.355	3	*MB*				5604.204	6	*MB*	17838.795	$4737°_{2/2}-22576_{2/2}$	−1
5526.862	20	*MB*	18088.425	$4201°_{1/2}-22290_{1/2}$	−1	5605.843	2	*MB*	17833.579	$23267_{3/2}-41100°_{2/2}$	−1
5527.322	4	*MB*	18086.920	$14739_{2/2}-32826°_{1/2}$	13	5606.218	2	*MB*	17832.386	$11759_{5/2}-29591°_{6/2}$	−19
5532.042	20	*MB*	18071.488	$13675_{2/2}-31747°_{1/2}$	−32	5610.249	150	*MB*	17819.574	$8448_{2/2}-26268°_{3/2}$	12
5532.267	2	*MB*	18070.753	$1410°_{4/2}-19481_{4/2}$	17	5610.494	40	*MB*	17818.795	$13027_{6/2}-30846°_{7/2}$	−28
5533.554	12	*MB*	18066.550	$13784°_{1/2}-31851_{2/2}$	−12	5610.876	40	*MB*	17817.582	$13527_{4/2}-31344°_{3/2}$	−6
5535.758	2	*MB*	18059.357	$4844°_{1/2}-22903_{1/2}$	27					$16159°_{3/2}-33977_{3/2}$	−21
5536.694	1	*MB*	18056.304	$9778°_{2/2}-27835_{1/2}$	58	5613.691	70	*MB*	17808.648	$11454_{6/2}-29263°_{5/2}$	11
5537.293	30	*MB*	18054.351	$17571_{4/2}-35625°_{3/2}$	52	5616.338	10	*MB*	17800.255	$12365°_{4/2}-30166_{3/2}$	4
5538.990	5	*MB*	18048.820	$15859_{4/2}-33908°_{4/2}$	−9					$10924°_{4/2}-28725_{4/2}$	−16
5540.212	1	*MB*	18044.839	$11949°_{3/2}-29994_{2/2}$	−12	5620.086	7	*MB*	17788.384	$14827_{3/2}-32616°_{4/2}$	−11
5542.014	10	*MB*	18038.972	$11325°_{2/2}-29364_{3/2}$	13	5622.083	7	*MB*	17782.065		
5543.107	5	*MB*	18035.415	$10314_{4/2}-28349°_{3/2}$	−4	5623.004	40	*MB*	17779.153	$7713°_{4/2}-25492_{5/2}$	−8
5543.723	30	*MB*	18033.410	$9778°_{2/2}-27812_{2/2}$	−1	5625.221	15	*MB*	17772.146	$15822_{3/2}-33594°_{2/2}$	53
5544.465	7	*MB*	18030.997	$13012°_{2/2}-31043_{2/2}$	−17	5626.048	6	*MB*	17769.534	$8175°_{2/2}-25945_{3/2}$	1
5546.370	10	*MB*	18024.804	$6638°_{4/2}-24663_{4/2}$	9	5626.728	25	*MB*	17767.386	$13256_{1/2}-31024°_{2/2}$	11
5547.074	8	*MB*	18022.517	$10274°_{3/2}-28297_{3/2}$	15	5628.981	12	*MB*	17760.275	$7059°_{4/2}-24819_{3/2}$	13
5548.600	20	*MB*	18017.560	$15576_{1/2}-33594°_{2/2}$	−23	5630.380	30	*MB*	17755.862	$13268_{2/2}-31024°_{2/2}$	4
5550.037	70	*MB*	18012.895	$10314_{4/2}-28327°_{5/2}$	−13	5631.401	5	*MB*	17752.643		
5551.721	15	*MB*	18007.431	$13758°_{1/2}-31766_{1/2}$	−7	5633.306	6	*MB*	17746.639	$10088°_{1/2}-27835_{1/2}$	47
5556.767	30	*MB*	17991.079	$11759_{5/2}-29750°_{5/2}$	0	5636.239	2	*MB*	17737.404	$12057°_{2/2}-29794_{3/2}$	−5
5556.946	120	*MB*	17990.500	$14625_{5/2}-32616°_{4/2}$	−15	5637.353	100	*MB*	17733.899	$11309_{7/2}-29043°_{6/2}$	18
5558.483	5	*MB*	17985.525	$14387_{4/2}-32372°_{4/2}$	16	5637.473	4	*MB*	17733.522		
5559.804	8	*MB*	17981.252	$13784°_{1/2}-31766_{1/2}$	−22	5637.872	10	*MB*	17732.267	$15803_{4/2}-33535°_{3/2}$	−58
5561.086	20	*MB*	17977.107	$15134_{4/2}-33111°_{3/2}$	−5	5638.098	5	*MB*	17731.556	$4844°_{1/2}-22576_{2/2}$	30
5561.448	40	*MB*	17975.936	$11759_{5/2}-29735°_{4/2}$	−9	5638.305	3	*MB*			
5565.506	3	*MB*	17962.830	$16192°_{4/2}-34155_{3/2}$	−14	5640.583	5	*MB*	17723.744	$10088°_{1/2}-27812_{2/2}$	−13
5566.710	4	*MB*	17958.945	$12466°_{1/2}-30425_{2/2}$	26	5645.954	10	*MB*	17706.884	$27187_{3/2}-44893°_{3/2}$	−7
5571.055	3	*MB*	17944.938			5648.947	10	*MB*	17697.502	$14049_{1/2}-31747°_{1/2}$	20
5571.439	3	*MB*	17943.702	$26479_{1/2}-44423°_{1/2}$	53					$10114°_{2/2}-27812_{2/2}$	−12
5575.261	2	*MB*	17931.401	$14481°_{2/2}-32413_{3/2}$	−14	5650.025	5	*MB*	17694.126	$13436_{2/2}-31130°_{3/2}$	−2
5575.267	2	*MB*	17931.381	$14481°_{2/2}-32413_{3/2}$	−34	5654.225	10	*MB*	17680.983	$10646_{5/2}-28327°_{5/2}$	−17

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
5655.637	3	*MB*	17676.568			5733.696	15	*MB*	17435.920	$12456_{3\,1/2}-29892°_{3\,1/2}$	−10
5655.693	8	*MB*	17676.393	$15434_{2\,1/2}-33111°_{3\,1/2}$	−70	5740.169	25	*MB*	17416.259	$13659°_{4\,1/2}-31075_{4\,1/2}$	−14
5659.519	10	*MB*	17664.444	$8280°_{2\,1/2}-25945_{3\,1/2}$	−5	5740.330	20	*MB*	17415.770	$12704_{1\,1/2}-30120°_{1\,1/2}$	−1
5660.479	20	*MB*	17661.448	$10314_{4\,1/2}-27975°_{4\,1/2}$	−8	5741.575	8	*MB*	17411.994	$13758°_{1\,1/2}-31170_{1\,1/2}$	19
5662.230	4	*MB*	17655.986	$10641°_{2\,1/2}-28297_{3\,1/2}$	−44	5743.652	5	*MB*	17405.697	$987°_{4\,1/2}-18393_{3\,1/2}$	−18
5665.339	20	*MB*	17646.297	$10703_{4\,1/2}-28349°_{3\,1/2}$	20	5744.221	12	*MB*	17403.973	$7259°_{3\,1/2}-24663_{4\,1/2}$	−6
5667.967	25	*MB*	17638.115	$12097_{3\,1/2}-29735°_{4\,1/2}$	−21	5744.401	20	*MB*	17403.428	$12762°_{4\,1/2}-30166_{3\,1/2}$	12
5668.917	200	*MB*	17635.160	$8131_{4\,1/2}-25766°_{4\,1/2}$	22	5747.830	4	*MB*	17393.046	$16159°_{3\,1/2}-33552_{2\,1/2}$	0
5672.402	2	*MB*	17624.325	$13527_{4\,1/2}-31151°_{5\,1/2}$	30	5750.634	30	*MB*	17384.565	$11340°_{3\,1/2}-28725_{4\,1/2}$	15
5672.583	5	*MB*	17623.763	$10703_{4\,1/2}-28327°_{5\,1/2}$	−2	5751.095	10	*MB*	17383.171	$12751°_{5\,1/2}-30134_{5\,1/2}$	44
5673.492	2	*MB*	17620.939	$5283°_{0\,1/2}-22903_{1\,1/2}$	−5	5751.821	5	*MB*	17380.977	$10454°_{1\,1/2}-27835_{1\,1/2}$	17
5678.438	10	*MB*	17605.591	$26817_{2\,1/2}-44423°_{1\,1/2}$	−47	5754.676	20	*MB*	17372.354	$12762°_{4\,1/2}-30134_{5\,1/2}$	86
5679.030	40	*MB*	17603.756	$13527_{4\,1/2}-31130°_{3\,1/2}$	12	5755.622	4	*MB*	17369.499	$14481°_{2\,1/2}-31851_{2\,1/2}$	32
5680.260	40	*MB*	17599.944	$2382°_{4\,1/2}-19982_{4\,1/2}$	3	5757.799	25	*MB*	17362.932	$16545_{5\,1/2}-33908°_{4\,1/2}$	8
5682.956	10	*MB*	17591.595	$5675°_{4\,1/2}-23267_{3\,1/2}$	7	5760.165	30	*MB*	17355.800	$15529_{2\,1/2}-32885°_{2\,1/2}$	9
5683.109	40	*MB*	17591.121	$15235_{1\,1/2}-32826°_{1\,1/2}$	32	5762.627	20	*MB*	17348.385	$13675_{2\,1/2}-31024°_{2\,1/2}$	31
5683.747	70	*MB*	17589.146	$11454_{6\,1/2}-29043°_{6\,1/2}$	−6	5762.997	60	*MB*	17347.271	$28096_{8\,1/2}-45443°_{7\,1/2}$	−8
5684.366	20	*MB*	17587.231	$13436_{2\,1/2}-31024°_{2\,1/2}$	9	5764.673	20	*MB*	17342.228	$31747°_{1\,1/2}-49089_{2\,1/2}$	−14
5684.928	30	*MB*	17585.493	$11458_{5\,1/2}-29043°_{6\,1/2}$	−7					$17171°_{5\,1/2}-34513_{6\,1/2}$	5
5685.836	100	*MB*	17582.684	$15281_{6\,1/2}-32864°_{5\,1/2}$	8	5766.273	8	*MB*	17337.416	$11387°_{3\,1/2}-28725_{4\,1/2}$	0
5687.544	6	*MB*	17577.404	$3363°_{2\,1/2}-20940_{3\,1/2}$	−7	5768.887	160	*MB*	17329.560	$10646_{5\,1/2}-27975°_{4\,1/2}$	11
5687.669	3	*MB*	17577.018	$7522°_{0\,1/2}-25099_{1\,1/2}$	−5	5769.005	50	*MB*	17329.205		
5688.113	20	*MB*	17575.646	$10820_{2\,1/2}-28396°_{2\,1/2}$	−17	5770.555	15	*MB*	17324.551	$5942°_{3\,1/2}-23267_{3\,1/2}$	−1
5691.475	20	*MB*	17565.264	$5010°_{2\,1/2}-22576_{2\,1/2}$	−35	5771.485	8	*MB*	17321.759	$17976_{2\,1/2}-35298°_{2\,1/2}$	−17
5693.088	5	*MB*	17560.287	$7259°_{3\,1/2}-24819_{3\,1/2}$	28	5771.976	60	*MB*	17320.286	$10058_{6\,1/2}-27378°_{5\,1/2}$	−2
5694.960	15	*MB*	17554.515	$15434_{2\,1/2}-32989°_{3\,1/2}$	−3	5773.442	20	*MB*	17315.888	$15510_{0\,1/2}-32826°_{1\,1/2}$	6
5695.842	80	*MB*	17551.797	$13117_{4\,1/2}-30669°_{4\,1/2}$	17	5775.802	50	*MB*	17308.813	$15576_{1\,1/2}-32885°_{2\,1/2}$	14
5696.084	2	*MB*	17551.051	$5716°_{3\,1/2}-23267_{3\,1/2}$	−83	5777.938	3	*MB*	17302.414	$5964°_{3\,1/2}-23267_{3\,1/2}$	−40
5697.402	20	*MB*	17546.991	$12260°_{3\,1/2}-29807_{3\,1/2}$	1	5779.710	8	*MB*	17297.109	$15529_{2\,1/2}-32826°_{1\,1/2}$	17
5698.624	6	*MB*	17543.228			5782.047	15	*MB*	17290.118	$17571_{4\,1/2}-34861°_{5\,1/2}$	−6
5698.786	8	*MB*	17542.729	$8402°_{3\,1/2}-25945_{3\,1/2}$	2	5783.953	60	*MB*	17284.420	$11759_{5\,1/2}-29043°_{6\,1/2}$	34
5699.912	10	*MB*	17539.264	$10798°_{2\,1/2}-28337_{2\,1/2}$	5	5784.149	30	*MB*	17283.835	$27353_{7\,1/2}-44637°_{6\,1/2}$	−42
5700.504	4	*MB*	17537.443	$10274°_{3\,1/2}-27812_{2\,1/2}$	16	5787.544	8	*MB*	17273.696		
5702.626	7	*MB*	17530.917			5788.025	30	*MB*	17272.261	$10703_{4\,1/2}-27975°_{4\,1/2}$	−52
5703.217	80	*MB*	17529.100	$10820_{2\,1/2}-28349°_{3\,1/2}$	4	5788.572	20	*MB*	17270.628	$15593_{6\,1/2}-32864°_{5\,1/2}$	11
5706.248	10	*MB*	17519.789	$23200_{2\,1/2}-40720°_{1\,1/2}$	−1	5790.345	10	*MB*	17265.340	$6517°_{2\,1/2}-23782_{2\,1/2}$	−31
5707.733	3	*MB*	17515.231	$6638°_{4\,1/2}-24153_{3\,1/2}$	23	5795.361	6	*MB*	17250.397	$16159°_{3\,1/2}-33409_{3\,1/2}$	36
5708.486	12	*MB*	17512.921	$17300°_{3\,1/2}-34813_{2\,1/2}$	29	5796.453	25	*MB*	17247.147	$14097_{3\,1/2}-31344°_{3\,1/2}$	13
5711.433	100	*MB*	17503.884	$11759_{5\,1/2}-29263°_{5\,1/2}$	14	5797.420	30	*MB*	17244.270	$12704_{1\,1/2}-29948°_{2\,1/2}$	−9
5715.260	80	*MB*	17492.164	$12456_{3\,1/2}-29948°_{2\,1/2}$	−3	5798.297	15	*MB*	17241.662	$7259°_{3\,1/2}-24500_{2\,1/2}$	−18
5717.641	3	*MB*	17484.880	$15565°_{2\,1/2}-33050_{1\,1/2}$	9	5798.963	12	*MB*	17239.682	$10274°_{3\,1/2}-27514_{3\,1/2}$	−6
5717.893	2	*MB*	17484.109	$5716°_{3\,1/2}-23200_{2\,1/2}$	−5	5799.340	6	*MB*	17238.561	$15134_{4\,1/2}-32372°_{4\,1/2}$	−9
5718.591	50	*MB*	17481.975	$15134_{4\,1/2}-32616°_{4\,1/2}$	6	5799.791	30	*MB*	17237.221	$25492_{5\,1/2}-42729°_{5\,1/2}$	25
5726.648	3	*MB*	17457.379	$5118°_{2\,1/2}-22576_{2\,1/2}$	15					$3703°_{3\,1/2}-20940_{3\,1/2}$	−23
5727.249	50	*MB*	17455.547	$17571_{4\,1/2}-35026°_{4\,1/2}$	4	5800.401	6	*MB*	17235.408	$5964°_{3\,1/2}-23200_{2\,1/2}$	−26
5728.528	8	*MB*	17451.650	$13217_{3\,1/2}-30669°_{4\,1/2}$	−75	5801.183	10	*MB*	17233.085	$6549°_{2\,1/2}-23782_{2\,1/2}$	2
5729.002	10	*MB*	17450.206	$14315°_{0\,1/2}-31766_{1\,1/2}$	29	5803.240	15	*MB*	17226.976	$14739_{2\,1/2}-31966°_{2\,1/2}$	−10
5729.647	8	*MB*	17448.242	$5819°_{4\,1/2}-23267_{3\,1/2}$	4	5804.160	10	*MB*	17224.246	$12057°_{2\,1/2}-29281_{2\,1/2}$	−20
5731.763	8	*MB*	17441.800	$16152_{3\,1/2}-33594°_{2\,1/2}$	26	5805.402	7	*MB*	17220.561	$25492_{5\,1/2}-42712°_{6\,1/2}$	2
5731.938	15	*MB*	17441.268	$12365°_{4\,1/2}-29807_{3\,1/2}$	−3	5806.161	25	*MB*	17218.310	$15822_{3\,1/2}-33040°_{4\,1/2}$	16

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5807.443	5	*MB*	17214.509	$9053_{3\,1/2}-26268°_{3\,1/2}$	−64	5898.085	30	*MB*	16949.958	$7713°_{4\,1/2}-24663_{4\,1/2}$	−7
5808.546	6	*MB*	17211.240	$23508_{1\,1/2}-40720°_{1\,1/2}$	−1	5898.947	15	*MB*	16947.481	$24153_{3\,1/2}-41100°_{2\,1/2}$	15
5814.422	1	*MB*	17193.847	$10641°_{2\,1/2}-27835_{1\,1/2}$	56	5899.096	2	*MB*	16947.053	$11387°_{3\,1/2}-28334_{4\,1/2}$	28
5815.759	5	*MB*	17189.894	$3593°_{4\,1/2}-20783_{5\,1/2}$	−15	5899.990	2	*MB*	16944.485		
5817.104	15	*MB*	17185.919	$15803_{4\,1/2}-32989°_{3\,1/2}$	12	5902.541	10	*MB*	16937.162	$23782_{2\,1/2}-40720°_{1\,1/2}$	31
5817.812	60	*MB*	17183.828	$8175°_{2\,1/2}-25359_{2\,1/2}$	5	5904.727	10	*MB*	16930.892	$27706_{6\,1/2}-44637°_{6\,1/2}$	−24
5818.769	15	*MB*	17181.002	$15859_{4\,1/2}-33040°_{4\,1/2}$	12	5906.296	10	*MB*	16926.394	$14097_{3\,1/2}-31024°_{2\,1/2}$	13
5820.145	5	*MB*	17176.940	$9723°_{4\,1/2}-26900_{3\,1/2}$	−78	5908.540	2	*MB*	16919.966	$16159°_{3\,1/2}-33079_{3\,1/2}$	−9
5822.487	10	*MB*	17170.031	$10641°_{2\,1/2}-27811_{3\,1/2}$	−22	5912.653	25	*MB*	16908.196	$17000_{3\,1/2}-33908°_{4\,1/2}$	10
5823.455	40	*MB*	17167.177	$15822_{3\,1/2}-32989°_{3\,1/2}$	18	5913.247	2	*MB*	16906.498	$12260°_{3\,1/2}-29166_{4\,1/2}$	−10
5826.865	20	*MB*	17157.130	$12751°_{5\,1/2}-29908_{4\,1/2}$	9	5915.461	2	*MB*	16900.170		
5828.864	8	*MB*	17151.246	$15565°_{2\,1/2}-32716_{2\,1/2}$	20	5915.604	5	*MB*	16899.761	$2581°_{4\,1/2}-19481_{4\,1/2}$	−21
5830.556	8	*MB*	17146.269	$12762°_{4\,1/2}-29908_{4\,1/2}$	6	5916.305	6	*MB*	16897.759	$19946°_{1\,1/2}-36844_{2\,1/2}$	22
5832.293	30	*MB*	17141.163	$8804°_{4\,1/2}-25945_{3\,1/2}$	−8	5917.192	1	*MB*	16895.226		
5832.802	12	*MB*	17139.667	$16454_{2\,1/2}-33594°_{2\,1/2}$	70	5918.237	2	*MB*	16892.243	$11742°_{5\,1/2}-28634_{5\,1/2}$	−27
5832.979	20	*MB*	17139.147	$14827_{3\,1/2}-31966°_{2\,1/2}$	22	5919.726	2	*MB*	16887.994	$16152_{3\,1/2}-33040°_{4\,1/2}$	18
5833.636	1	*MB*	17137.217	$16159°_{3\,1/2}-33296_{4\,1/2}$	−51	5919.872	10	*MB*	16887.577	$2595°_{1\,1/2}-19483_{2\,1/2}$	−3
5838.069	15	*MB*	17124.204	$17171°_{5\,1/2}-34295_{4\,1/2}$	0	5920.334	10	*MB*	16886.260	$14727_{1\,1/2}-31613°_{0\,1/2}$	−32
5839.040	20	*MB*	17121.356	$9778°_{2\,1/2}-26900_{3\,1/2}$	−11	5920.571	8	*MB*	16885.584	$16159°_{3\,1/2}-33045_{2\,1/2}$	25
5839.987	10	*MB*	17118.580	$10314_{4\,1/2}-27432°_{4\,1/2}$	−39	5921.150	8	*MB*	16883.933		
5840.151	3	*MB*	17118.099	$9723°_{4\,1/2}-26841_{4\,1/2}$	51	5922.949	50	*MB*	16878.804	$14252_{3\,1/2}-31130°_{3\,1/2}$	0
5842.093	20	*MB*	17112.409	$12326°_{6\,1/2}-29438_{5\,1/2}$	9	5924.195	7	*MB*	16875.254	$14276_{5\,1/2}-31151°_{5\,1/2}$	19
5845.925	20	*MB*	17101.192	$15134_{4\,1/2}-32235°_{3\,1/2}$	3	5924.905	25	*MB*	16873.232	$10641°_{2\,1/2}-27514_{3\,1/2}$	15
5846.750	7	*MB*	17098.779	$2382°_{4\,1/2}-19481_{4\,1/2}$	−14	5925.210	12	*MB*	16872.364	$11454_{6\,1/2}-28327°_{5\,1/2}$	−5
5848.839	40	*MB*	17092.672	$14252_{3\,1/2}-31344°_{3\,1/2}$	22	5926.183	12	*MB*	16869.594	$8896_{5\,1/2}-25766°_{4\,1/2}$	−31
5852.802	5	*MB*	17081.098	$16454_{2\,1/2}-33535°_{3\,1/2}$	18	5926.951	8	*MB*	16867.408		
5858.544	40	*MB*	17064.357	$10314_{4\,1/2}-27378°_{5\,1/2}$	4	5928.257	25	*MB*	16863.692	$13256_{1\,1/2}-30120°_{1\,1/2}$	−12
5860.365	7	*MB*	17059.055			5929.406	15	*MB*	16860.424	$9491°_{0\,1/2}-26351_{0\,1/2}$	6
5873.359	1	*MB*	17021.314	$12260°_{3\,1/2}-29281_{2\,1/2}$	29	5930.555	1	*MB*	16857.157		
5876.550	8	*MB*	17012.072	$11325°_{2\,1/2}-28337_{2\,1/2}$	39	5930.928	2	*MB*	16856.097	$16133_{2\,1/2}-32989°_{3\,1/2}$	74
5878.144	20	*MB*	17007.459	$14739_{2\,1/2}-31747°_{1\,1/2}$	−22	5932.300	15	*MB*	16852.199	$13268_{2\,1/2}-30120°_{1\,1/2}$	11
5879.030	20	*MB*	17004.896	$15859_{4\,1/2}-32864°_{5\,1/2}$	−18	5933.593	20	*MB*	16848.527	$2634°_{2\,1/2}-19483_{2\,1/2}$	−31
5879.677	6	*MB*	17003.024	$19920°_{3\,1/2}-36923_{4\,1/2}$	49	5934.571	20	*MB*	16845.750	$9634°_{1\,1/2}-26479_{1\,1/2}$	10
5881.689	30	*MB*	16997.208	$11340°_{3\,1/2}-28337_{2\,1/2}$	−7	5936.019	3	*MB*	16841.641	$2641°_{3\,1/2}-19483_{2\,1/2}$	−24
5883.746	6	*MB*	16991.266	$6517°_{2\,1/2}-23508_{1\,1/2}$	5	5938.262	15	*MB*	16835.279	$23640_{4\,1/2}-40475°_{3\,1/2}$	−82
5884.736	15	*MB*	16988.407	$9491°_{0\,1/2}-26479_{1\,1/2}$	−25	5941.539	50	*MB*	16825.994	$8927°_{5\,1/2}-25753_{6\,1/2}$	15
5885.349	20	*MB*	16986.638	$13758°_{1\,1/2}-30745_{1\,1/2}$	22	5943.856	6	*MB*	16819.435		
5886.084	7	*MB*	16984.517			5945.436	8	*MB*	16814.966	$12466°_{1\,1/2}-29281_{2\,1/2}$	22
5886.649	5	*MB*	16982.887	$11742°_{5\,1/2}-28725_{4\,1/2}$	−15	5946.235	8	*MB*	16812.706	$15803_{4\,1/2}-32616°_{4\,1/2}$	−2
5887.550	9	*MB*	16980.288	$10924°_{4\,1/2}-27905_{4\,1/2}$	7	5948.724	8	*MB*	16805.672	$10035°_{5\,1/2}-26841_{4\,1/2}$	0
5889.046	8	*MB*	16975.974	$25753_{6\,1/2}-42729°_{5\,1/2}$	20	5949.254	2	*MB*	16804.174		
				$19136°_{2\,1/2}-36112_{3\,1/2}$	−22	5952.040	3	*MB*	16796.309		
5889.627	20	*MB*	16974.299	$15517°_{6\,1/2}-32492_{5\,1/2}$	34	5952.222	7	*MB*	16795.795		
				$14049_{1\,1/2}-31024°_{2\,1/2}$	−15	5952.365	7	*MB*	16795.392	$10454°_{1\,1/2}-27249_{2\,1/2}$	−4
5894.424	3	*MB*	16960.486	$13784°_{1\,1/2}-30745_{1\,1/2}$	34	5952.511	5	*MB*	16794.980	$13012°_{2\,1/2}-29807_{3\,1/2}$	−2
5894.834	20	*MB*	16959.306	$27934_{4\,1/2}-44893°_{3\,1/2}$	5	5954.386	3	*MB*	16789.691	$19136°_{2\,1/2}-35925_{3\,1/2}$	34
				$25753_{6\,1/2}-42712°_{6\,1/2}$	−10	5955.446	3	*MB*	16786.703	$10646_{5\,1/2}-27432°_{4\,1/2}$	−8
5895.018	15	*MB*	16958.777	$16152_{3\,1/2}-33111°_{3\,1/2}$	−8	5956.146	3	*MB*	16784.730	$7878°_{3\,1/2}-24663_{4\,1/2}$	3
5895.677	12	*MB*	16956.881	$11340°_{3\,1/2}-28297_{3\,1/2}$	6	5957.282	7	*MB*	16781.529	$11949°_{3\,1/2}-28730_{3\,1/2}$	7
5897.627	6	*MB*	16951.274	$9316_{3\,1/2}-26268°_{3\,1/2}$	−16	5959.688	70	*MB*	16774.755	$13117_{4\,1/2}-29892°_{3\,1/2}$	0

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
5960.697	15	*MB*	16771.915	$14252_{3\,1/2}-31024°_{2\,1/2}$	17	6045.865	12	*MB*	16535.652	$17000_{3\,1/2}-33535°_{3\,1/2}$	23
5963.373	10b	*MB*	16764.389	$14387_{4\,1/2}-31151°_{5\,1/2}$	−32	6048.306	3	*MB*	16528.978	$4844°_{1\,1/2}-21373_{1\,1/2}$	0
5966.131	20	*MB*	16756.639	$15859_{4\,1/2}-32616°_{4\,1/2}$	−16	6051.584	15	*MB*	16520.025	$28117_{7\,1/2}-44637°_{6\,1/2}$	−3
5966.863	4	*MB*	16754.584	$7746°_{2\,1/2}-24500_{2\,1/2}$	13	6051.813	40	*MB*	16519.400	$1873°_{3\,1/2}-18393_{3\,1/2}$	7
5967.431	5	*MB*	16752.989	$14481°_{2\,1/2}-31234_{2\,1/2}$	40	6052.608	30	*MB*	16517.230	$14827_{3\,1/2}-31344°_{3\,1/2}$	25
										$11458_{5\,1/2}-27975°_{4\,1/2}$	−35
5968.057	20	*MB*	16751.232	$14404°_{7\,1/2}-31155_{6\,1/2}$	9						
5973.279	7	*MB*	16736.587	$11949°_{3\,1/2}-28685_{2\,1/2}$	19	6055.164	5	*MB*	16510.258		
5974.567	12	*MB*	16732.979	$16152_{3\,1/2}-32885°_{2\,1/2}$	−10	6056.460	20	*MB*	16506.725	$13659°_{4\,1/2}-30166_{3\,1/2}$	−2
5974.760	10	*MB*	16732.439	$10646_{5\,1/2}-27378°_{5\,1/2}$	−5	6057.354	20	*MB*	16504.289		
5975.298	8	*MB*	16730.932	$13217_{3\,1/2}-29948°_{2\,1/2}$	−5	6060.719	12	*MB*	16495.125	$16545_{5\,1/2}-33040°_{4\,1/2}$	41
5975.824	150	*MB*	16729.460	$10703_{4\,1/2}-27432°_{4\,1/2}$	−16	6064.186	1	*MB*	16485.695	$11325°_{2\,1/2}-27811_{3\,1/2}$	−19
5977.048	3	*MB*	16726.034	$14481°_{2\,1/2}-31207_{3\,1/2}$	37	6067.908	7	*MB*	16475.583	$13659°_{4\,1/2}-30134_{5\,1/2}$	2
5978.454	10	*MB*	16722.100			6069.290	10	*MB*	16471.831	$11340°_{3\,1/2}-27812_{2\,1/2}$	31
5980.004	6	*MB*	16717.766	$9634°_{1\,1/2}-26351_{0\,1/2}$	41	6069.625	15	*MB*	16470.922	$11340°_{3\,1/2}-27811_{3\,1/2}$	24
5980.119	8	*MB*	16717.444	$6549°_{2\,1/2}-23267_{3\,1/2}$	2	6069.820	8	*MB*	16470.393		
5980.589	9	*MB*	16716.131	$10798°_{2\,1/2}-27514_{3\,1/2}$	26	6072.306	12	*MB*	16463.650	$16152_{3\,1/2}-32616°_{4\,1/2}$	8
5981.026	7	*MB*	16714.909	$14625_{5\,1/2}-31340°_{6\,1/2}$	19	6075.185	12	*MB*	16455.848	$13436_{2\,1/2}-29892°_{3\,1/2}$	25
5985.206	9	*MB*	16703.236	$16159°_{3\,1/2}-32862_{3\,1/2}$	5	6077.550	15	*MB*	16449.445	$9316_{3\,1/2}-25766°_{4\,1/2}$	2
5990.414	7	*MB*	16688.714	$14481°_{2\,1/2}-31170_{1\,1/2}$	0	6078.299	6	*MB*	16447.418		
5991.001	4	*MB*	16687.079	$12751°_{5\,1/2}-29438_{5\,1/2}$	44	6079.307	15	*MB*	16444.690	$13675_{2\,1/2}-30120°_{1\,1/2}$	7
5991.144	8	*MB*	16686.681	$27950_{5\,1/2}-44637°_{6\,1/2}$	24	6080.904	5	*MB*	16440.372	$7713°_{4\,1/2}-24153_{3\,1/2}$	−4
5993.287	10	*MB*	16680.715	$13268_{2\,1/2}-29948°_{2\,1/2}$	19	6082.074	25	*MB*	16437.209	$15529_{2\,1/2}-31966°_{2\,1/2}$	37
5993.908	4	*MB*	16678.986	$6521°_{1\,1/2}-23200_{2\,1/2}$	−12	6084.435	5	*MB*	16430.831	$16454_{2\,1/2}-32885°_{2\,1/2}$	19
5995.261	100	*MB*	16675.222	$10703_{4\,1/2}-27378°_{5\,1/2}$	12	6084.981	8	*MB*	16429.357	$14315°_{0\,1/2}-30745_{1\,1/2}$	3
5995.446	60	*MB*	16674.708	$13217_{3\,1/2}-29892°_{3\,1/2}$	7	6087.046	7	*MB*	16423.783	$11387°_{3\,1/2}-27811_{3\,1/2}$	18
5997.029	40	*MB*	16670.306	$16192°_{4\,1/2}-32862_{3\,1/2}$	5	6089.364	20	*MB*	16417.531	$14252_{3\,1/2}-30669°_{4\,1/2}$	7
5998.321	2	*MB*	16666.716	$13758°_{1\,1/2}-30425_{2\,1/2}$	37	6090.972	20	*MB*	16413.197	$15822_{3\,1/2}-32235°_{3\,1/2}$	17
6004.186	3	*MB*	16650.435	$6549°_{2\,1/2}-23200_{2\,1/2}$	13	6098.327	100	*MB*	16393.402	$14276_{5\,1/2}-30669°_{4\,1/2}$	−1
6004.320	3	*MB*	16650.064			6100.104	25	*MB*	16388.626	$11949°_{3\,1/2}-28337_{2\,1/2}$	1
6007.816	7	*MB*	16640.375	$17171°_{5\,1/2}-33811_{4\,1/2}$	53	6101.237	8	*MB*	16385.583	$11949°_{3\,1/2}-28334_{4\,1/2}$	16
6010.251	4	*MB*	16633.633	$18393_{3\,1/2}-35026°_{4\,1/2}$	17	6102.328	5	*MB*	16382.653	$6521°_{1\,1/2}-22903_{1\,1/2}$	12
6010.596	8	*MB*	16632.679	$13117_{4\,1/2}-29750°_{5\,1/2}$	54	6102.760	20	*MB*	16381.494	$7259°_{3\,1/2}-23640_{4\,1/2}$	6
6013.559	20	*MB*	16624.483	$13268_{2\,1/2}-29892°_{3\,1/2}$	25	6103.949	5	*MB*	16378.303	$15235_{1\,1/2}-31613°_{0\,1/2}$	49
6015.104	4	*MB*	16620.213			6104.848	20	*MB*	16375.891	$15859_{4\,1/2}-32235°_{3\,1/2}$	15
6016.315	10	*MB*	16616.868	$13503_{0\,1/2}-30120°_{1\,1/2}$	−29	6108.745	50	*MB*	16365.444	$13527_{4\,1/2}-29892°_{3\,1/2}$	6
6018.352	3	*MB*	16611.244	$5964°_{3\,1/2}-22576_{2\,1/2}$	−29	6112.984	6	*MB*	16354.096	$6549°_{2\,1/2}-22903_{1\,1/2}$	30
6018.912	9	*MB*	16609.698	$16192°_{4\,1/2}-32802_{5\,1/2}$	0	6115.154	15	*MB*	16348.293	$11949°_{3\,1/2}-28297_{3\,1/2}$	9
6022.367	12	*MB*	16600.170	$24500_{2\,1/2}-41100°_{2\,1/2}$	−5	6119.454	8	*MB*	16336.805	$17571_{4\,1/2}-33908°_{4\,1/2}$	13
6024.575	6	*MB*	16594.086	$11340°_{3\,1/2}-27934_{4\,1/2}$	46	6120.694	9	*MB*	16333.496		
6029.149	15	*MB*	16581.497	$7059°_{4\,1/2}-23640_{4\,1/2}$	6	6124.768	8	*MB*	16322.631	$18704_{5\,1/2}-35026°_{4\,1/2}$	0
6032.131	10	*MB*	16573.300	$15565°_{2\,1/2}-32138_{2\,1/2}$	22	6126.116	25	*MB*	16319.039	$16545_{5\,1/2}-32864°_{5\,1/2}$	31
6033.256	3	*MB*	16570.209	$19946°_{1\,1/2}-36516_{1\,1/2}$	−20	6128.767	6	*MB*	16311.981		
6033.577	50	*MB*	16569.328	$15803_{4\,1/2}-32372°_{4\,1/2}$	17	6130.884	2	*MB*	16306.348	$7202°_{2\,1/2}-23508_{1\,1/2}$	−2
6034.199	70	*MB*	16567.620	$11759_{5\,1/2}-28327°_{5\,1/2}$	16	6132.002	40	*MB*	16303.375	$14827_{3\,1/2}-31130°_{3\,1/2}$	15
6035.476	70	*MB*	16564.114	$13027_{6\,1/2}-29591°_{6\,1/2}$	0	6134.580	15	*MB*	16296.524	$14727_{1\,1/2}-31024°_{2\,1/2}$	−11
6037.709	5	*MB*	16557.988	$16268_{1\,1/2}-32826°_{1\,1/2}$	−6	6136.564	20	*MB*	16291.255	$13515°_{3\,1/2}-29807_{3\,1/2}$	30
6038.025	6	*MB*	16557.122	$16159°_{3\,1/2}-32716_{2\,1/2}$	11	6138.535	6	*MB*	16286.024	$15565°_{2\,1/2}-31851_{2\,1/2}$	47
6040.416	6	*MB*	16550.568	$15822_{3\,1/2}-32372°_{4\,1/2}$	6	6139.173	12	*MB*	16284.332	$14739_{2\,1/2}-31024°_{2\,1/2}$	17
6042.226	1	*MB*	16545.610	$10641°_{2\,1/2}-27187_{3\,1/2}$	5	6139.822	10	*MB*	16282.610	$14387_{4\,1/2}-30669°_{4\,1/2}$	21
6043.378	250	*MB*	16542.456	$9725_{3\,1/2}-26268°_{3\,1/2}$	−13	6140.215	10	*MB*	16281.568	$24819_{3\,1/2}-41100°_{2\,1/2}$	−29

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
6140.523	6	*MB*	16280.752	$12057°_{2\,1/2}-28337_{2\,1/2}$	45	6239.643	8	*MB*	16022.126		
6141.328	9	*MB*	16278.618	$3703°_{3\,1/2}-19982_{4\,1/2}$	25	6241.448	12	*MB*	16017.492	$15134_{4\,1/2}-31151°_{5\,1/2}$	8
6143.369	70	*MB*	16273.209	$13675_{2\,1/2}-29948°_{2\,1/2}$	18	6241.991	10	*MB*	16016.099	$13027_{6\,1/2}-29043°_{6\,1/2}$	3
6145.060	7	*MB*	16268.731	$12365°_{4\,1/2}-28634_{5\,1/2}$	22	6242.372	12	*MB*	16015.121	$8804°_{4\,1/2}-24819_{3\,1/2}$	11
6148.204	3	*MB*	16260.412	$8402°_{3\,1/2}-24663_{4\,1/2}$	25	6243.407	4	*MB*	16012.466	$987°_{4\,1/2}-17000_{3\,1/2}$	70
6150.703	7	*MB*	16253.806	$29908_{4\,1/2}-46162°_{4\,1/2}$	18	6243.946	10	*MB*	16011.084	$2382°_{4\,1/2}-18393_{3\,1/2}$	3
				$16159°_{3\,1/2}-32413_{3\,1/2}$	−3	6248.758	5	*MB*	15998.754		
6151.265	25	*MB*	16252.321	$12097_{3\,1/2}-28349°_{3\,1/2}$	15	6250.180	5	*MB*	15995.115		
6152.293	15	*MB*	16249.605	$13659°_{4\,1/2}-29908_{4\,1/2}$	30	6250.496	6	*MB*	15994.306		
6157.605	8	*MB*	16235.587	$13027_{6\,1/2}-29263°_{5\,1/2}$	7	6250.750	5	*MB*	15993.656		
6157.673	4	*MB*	16235.408	$13758°_{1\,1/2}-29994_{2\,1/2}$	37	6250.917	10	*MB*	15993.229	$15565°_{2\,1/2}-31558_{3\,1/2}$	23
6162.711	15	*MB*	16222.136	$9723°_{4\,1/2}-25945_{3\,1/2}$	75	6251.456	3	*MB*	15991.850		
6163.182	25	*MB*	16220.896	$16192°_{4\,1/2}-32413_{3\,1/2}$	16	6252.474	10	*MB*	15989.246	$17000_{3\,1/2}-32989°_{3\,1/2}$	35
6163.389	10	*MB*	16220.351			6253.574	7	*MB*	15986.434	$7522°_{0\,1/2}-23508_{1\,1/2}$	12
6164.407	20	*MB*	16217.672	$15529_{2\,1/2}-31747°_{1\,1/2}$	6	6253.951	5	*MB*	15985.470	$11949°_{3\,1/2}-27934_{4\,1/2}$	21
6167.836	12	*MB*	16208.656	$11742°_{5\,1/2}-27950_{5\,1/2}$	10	6260.216	8	*MB*	15969.472		
6167.983	6	*MB*	16208.270	$7059°_{4\,1/2}-23267_{3\,1/2}$	−8	6260.417	10	*MB*	15968.960	$12365°_{4\,1/2}-28334_{4\,1/2}$	10
6168.670	1	*MB*	16206.465			6261.050	10	*MB*	15967.345		
6169.803	7	*MB*	16203.489	$4737°_{2\,1/2}-20940_{3\,1/2}$	23	6262.030	10	*MB*	15964.846	$7818°_{1\,1/2}-23782_{2\,1/2}$	3
6171.260	5	*MB*	16199.663			6262.203	5	*MB*	15964.405	$11742°_{5\,1/2}-27706_{6\,1/2}$	19
6172.458	6	*MB*	16196.519	$14827_{3\,1/2}-31024°_{2\,1/2}$	66	6262.278	4	*MB*	15964.214	$17571_{4\,1/2}-33535°_{3\,1/2}$	−20
6174.015	10	*MB*	16192.435	$11742°_{5\,1/2}-27934_{4\,1/2}$	42	6262.965	2	*MB*	15962.463	$12762°_{4\,1/2}-28725_{4\,1/2}$	−43
6180.069	25	*MB*	16176.573	$10641°_{2\,1/2}-26817_{2\,1/2}$	75	6263.212	2	*MB*	15961.834		
6182.315	12	*MB*	16170.696	$15576_{1\,1/2}-31747°_{1\,1/2}$	21	6265.073	3	*MB*	15957.092		
6183.942	25	*MB*	16166.441	$9778°_{2\,1/2}-25945_{3\,1/2}$	32	6269.125	4	*MB*	15946.778		
6185.288	10	*MB*	16162.923	$11742°_{5\,1/2}-27905_{4\,1/2}$	12	6271.300	3	*MB*	15941.248	$7259°_{3\,1/2}-23200_{2\,1/2}$	−7
6189.335	6	*MB*	16152.355	$0°_{3\,1/2}-16152_{3\,1/2}$	−21	6272.024	100	*MB*	15939.408	$12456_{3\,1/2}-28396°_{2\,1/2}$	4
6193.122	3	*MB*	16142.478	$19483_{2\,1/2}-35625°_{3\,1/2}$	3	6275.089	5	*MB*	15931.622	$12365°_{4\,1/2}-28297_{3\,1/2}$	−44
6195.983	4	*MB*	16135.025			6275.727	5	*MB*	15930.003	$5010°_{2\,1/2}-20940_{3\,1/2}$	34
6199.565	6	*MB*	16125.702	$16192°_{4\,1/2}-32318_{3\,1/2}$	−6	6278.155	6	*MB*	15923.842	$11454_{6\,1/2}-27378°_{5\,1/2}$	28
6200.581	8	*MB*	16123.060	$2581°_{4\,1/2}-18704_{5\,1/2}$	4	6279.115	8	*MB*	15921.408	$7278°_{1\,1/2}-23200_{2\,1/2}$	0
6201.829	10	*MB*	16119.815	$3363°_{2\,1/2}-19483_{2\,1/2}$	18	6281.592	10	*MB*	15915.129	$13758°_{1\,1/2}-29673_{2\,1/2}$	30
6205.613	6	*MB*	16109.986			6281.954	4	*MB*	15914.212		
6205.764	5	*MB*	16109.594	$17300°_{3\,1/2}-33409_{3\,1/2}$	7	6283.559	10	*MB*	15910.147	$15434_{2\,1/2}-31344°_{3\,1/2}$	18
6208.676	7	*MB*	16102.039	$16133_{2\,1/2}-32235°_{3\,1/2}$	−5	6283.990	1	*CK*	15909.056	$11340°_{3\,1/2}-27249_{2\,1/2}$	−14
6209.358	2	*MB*	16100.270	$32989°_{3\,1/2}-49089_{2\,1/2}$	2	6285.727	12	*MB*	15904.660	$7878°_{3\,1/2}-23782_{2\,1/2}$	−2
6213.085	7	*MB*	16090.612	$5283°_{0\,1/2}-21373_{1\,1/2}$	18	6286.568	7	*MB*	15902.532	$9778°_{2\,1/2}-25681_{1\,1/2}$	30
6215.115	10	*MB*	16085.357	$22576_{2\,1/2}-38661°_{1\,1/2}$	7	6287.906	5	*MB*	15899.148	$14049_{1\,1/2}-29948°_{2\,1/2}$	−4
6216.079	15	*MB*	16082.862	$16152_{3\,1/2}-32235°_{3\,1/2}$	0	6290.404	7	*MB*	15892.835	$12456_{3\,1/2}-28349°_{3\,1/2}$	0
6217.600	5	*MB*	16078.928			6291.626	5	*MB*	15889.748		
6219.444	2	*MB*	16074.161			6291.932	4	*MB*	15888.975	$13784°_{1\,1/2}-29673_{2\,1/2}$	39
6220.808	10	*MB*	16070.636	$14049_{1\,1/2}-30120°_{1\,1/2}$	−8	6293.356	7	*MB*	15885.380	$17000_{3\,1/2}-32885°_{2\,1/2}$	20
6224.738	4	*MB*	16060.490			6296.142	10	*MB*	15878.351	$12097_{3\,1/2}-27975°_{4\,1/2}$	8
6225.392	7	*MB*	16058.803	$15281_{6\,1/2}-31340°_{6\,1/2}$	12	6297.110	2	*MB*	15875.910		
6231.060	3	*MB*	16044.195	$14625_{5\,1/2}-30669°_{4\,1/2}$	−3	6299.484	60	*MB*	15869.927	$15281_{6\,1/2}-31151°_{5\,1/2}$	−4
6232.446	40	*MB*	16040.627	$9725_{3\,1/2}-25766°_{4\,1/2}$	5	6299.809	5	*MB*	15869.108		
6233.278	7	*MB*	16038.486	$16159°_{3\,1/2}-32197_{4\,1/2}$	40	6310.551	8	*MB*	15842.096	$14827_{3\,1/2}-30669°_{4\,1/2}$	17
6233.756	10	*MB*	16037.256	$15576_{1\,1/2}-31613°_{0\,1/2}$	−8	6312.000	5	*MB*	15838.459	$10641°_{2\,1/2}-26479_{1\,1/2}$	−24
6235.948	8	*MB*	16031.619	$13758°_{1\,1/2}-29790_{0\,1/2}$	19	6312.612	10	*MB*	15836.923		
6236.377	5	*MB*	16030.516			6314.577	6	*MB*	15831.995		

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
6314.869	2	*MB*	15831.263			6378.502	4	*MB*	15673.329	$11759_{5\,1/2}-27432°_{4\,1/2}$	14
6315.165	5	*MB*	15830.521	$10114°_{2\,1/2}-25945_{3\,1/2}$	8	6379.670	5	*MB*	15670.460	$10274°_{3\,1/2}-25945_{3\,1/2}$	35
6315.501	7	*MB*	15829.679	$9269°_{0\,1/2}-25099_{1\,1/2}$	23	6380.884	5	*MB*	15667.478	$10684°_{0\,1/2}-26351_{0\,1/2}$	9
6315.771	4	*MB*	15829.002			6381.228	5	*MB*	15666.634		
6318.549	10	*MB*	15822.043	$0°_{3\,1/2}-15822_{3\,1/2}$	−15	6381.906	4	*MB*	15664.969	$13784°_{1\,1/2}-29449_{1\,1/2}$	25
				$5118°_{2\,1/2}-20940_{3\,1/2}$	10						
						6383.883	3	*MB*	15660.118		
6319.390	1	*MB*	15819.937			6385.323	8	*MB*	15656.587	$24819_{3\,1/2}-40475°_{3\,1/2}$	−3
6321.261	12	*MB*	15815.255	$15529_{2\,1/2}-31344°_{3\,1/2}$	3	6388.350	6	*MB*	15649.168		
6321.372	8	*MB*	15814.977	$19483_{2\,1/2}-35298°_{2\,1/2}$	12	6390.654	12	*MB*	15643.526	$19982_{4\,1/2}-35625°_{3\,1/2}$	13
6321.612	10	*MB*	15814.377	$16152_{3\,1/2}-31966°_{2\,1/2}$	6	6391.880	3	*MB*	15640.526	$14252_{3\,1/2}-29892°_{3\,1/2}$	27
6322.696	3	*MB*	15811.666			6392.773	15	*MB*	15638.341	$9723°_{4\,1/2}-25361_{4\,1/2}$	2
6323.391	3	*MB*	15809.928			6393.022	50	*MB*	15637.732	$14097_{3\,1/2}-29735°_{4\,1/2}$	13
6323.577	5	*MB*	15809.463							$11742°_{5\,1/2}-27379_{5\,1/2}$	28
6323.887	8	*MB*	15808.688			6394.201	4	*MB*	15634.848		
6324.753	5	*MB*	15806.523			6395.465	5	*MB*	15631.758	$19136°_{2\,1/2}-34767_{1\,1/2}$	95
6324.918	3	*MB*	15806.111	$33811_{4\,1/2}-49617°_{5\,1/2}$	−21	6398.199	5	*MB*	15625.079	$7278°_{1\,1/2}-22903_{1\,1/2}$	27
6329.407	8	*MB*	15794.901	$14097_{3\,1/2}-29892°_{3\,1/2}$	−86	6398.459	7	*MB*	15624.444	$12326°_{6\,1/2}-27950_{5\,1/2}$	−29
6330.923	8	*MB*	15791.119	$12326°_{6\,1/2}-28117_{7\,1/2}$	17	6400.662	12	*MB*	15619.066	$30245_{4\,1/2}-45864°_{5\,1/2}$	−5
6333.458	4	*MB*	15784.798	$19136°_{2\,1/2}-34920_{3\,1/2}$	34					$11759_{5\,1/2}-27378°_{5\,1/2}$	18
6333.817	5	*MB*	15783.903			6401.203	7	*MB*	15617.746	$17976_{2\,1/2}-33594°_{2\,1/2}$	7
6335.117	7	*MB*	15780.664	$16454_{2\,1/2}-32235°_{3\,1/2}$	−19	6406.330	6	*MB*	15605.247	$15565°_{2\,1/2}-31170_{1\,1/2}$	23
6337.603	3	*MB*	15774.474			6408.911	5	*MB*	15598.963		
6338.314	7	*MB*	15772.705	$6517°_{2\,1/2}-22290_{1\,1/2}$	9	6412.850	15	*MB*	15589.382	$15434_{2\,1/2}-31024°_{2\,1/2}$	5
6342.331	5	*MB*	15762.715	$7746°_{2\,1/2}-23508_{1\,1/2}$	20	6414.622	6	*MB*	15585.075	$12365°_{4\,1/2}-27950_{5\,1/2}$	−9
6343.949	70	*MB*	15758.695	$2634°_{2\,1/2}-18393_{3\,1/2}$	34	6415.377	1	*MB*	15583.241	$14481°_{2\,1/2}-30065_{3\,1/2}$	7
6346.735	9	*MB*	15751.778	$2641°_{3\,1/2}-18393_{3\,1/2}$	10	6416.404	7	*MB*	15580.747	$9778°_{2\,1/2}-25359_{2\,1/2}$	47
6347.103	8	*MB*	15750.864	$8402°_{3\,1/2}-24153_{3\,1/2}$	66	6420.026	7	*MB*	15571.957	$15517°_{6\,1/2}-31089_{5\,1/2}$	−1
6348.750	7	*MB*	15746.778	$15593_{6\,1/2}-31340°_{6\,1/2}$	45	6421.498	10	*MB*	15568.387	$23267_{3\,1/2}-38835°_{2\,1/2}$	4
6349.389	12	*MB*	15745.193	$16192°_{4\,1/2}-31937_{3\,1/2}$	7	6422.916	12	*MB*	15564.950	$15281_{6\,1/2}-30846°_{7\,1/2}$	−29
6349.554	4	*MB*	15744.784	$17300°_{3\,1/2}-33045_{2\,1/2}$	0	6425.064	5	*MB*	15559.747	$11340°_{3\,1/2}-26900_{3\,1/2}$	−8
6350.462	5	*MB*	15742.533			6425.289	25	*MB*	15559.202	$17976_{2\,1/2}-33535°_{3\,1/2}$	−20
6350.979	3	*MB*	15741.252	$25359_{2\,1/2}-41100°_{2\,1/2}$	6	6425.850	15	*MB*	15557.843	$15593_{6\,1/2}-31151°_{5\,1/2}$	−30
6355.899	5	*MB*	15729.067			6427.146	5	*MB*	15554.706		
6355.987	4	*MB*	15728.849			6427.343	6	*MB*	15554.229	$7713°_{4\,1/2}-23267_{3\,1/2}$	−32
6356.242	5	*MB*	15728.218			6428.505	10	*MB*	15551.418	$12260°_{3\,1/2}-27811_{3\,1/2}$	10
6356.295	4	*MB*	15728.087			6432.601	6	*MB*	15541.515	$15803_{4\,1/2}-31344°_{3\,1/2}$	−2
6361.274	5	*MB*	15715.776	$4266°_{3\,1/2}-19982_{4\,1/2}$	−13	6432.986	4	*MB*	15540.585		
6361.365	4	*MB*	15715.552	$26817_{2\,1/2}-42533°_{1\,1/2}$	29	6433.307	10	*MB*	15539.810	$17571_{4\,1/2}-33111°_{3\,1/2}$	48
6362.739	5	*MB*	15712.158			6433.495	15	*MB*	15539.356	$12365°_{4\,1/2}-27905_{4\,1/2}$	5
6363.723	6	*MB*	15709.728			6434.672	6	*MB*	15536.513		
6367.070	7	*MB*	15701.470	$7202°_{2\,1/2}-22903_{1\,1/2}$	25	6435.012	7	*MB*	15535.693	$32616°_{4\,1/2}-48151_{4\,1/2}$	−26
6367.884	4	*MB*	15699.463			6435.364	8	*MB*	15534.843	$12762°_{4\,1/2}-28297_{3\,1/2}$	11
6368.392	5	*MB*	15698.211			6435.961	3	*MB*	15533.402		
6368.999	6	*MB*	15696.715	$14252_{3\,1/2}-29948°_{2\,1/2}$	−20	6440.352	15	*MB*	15522.811	$15822_{3\,1/2}-31344°_{3\,1/2}$	42
6369.167	12	*MB*	15696.301	$15434_{2\,1/2}-31130°_{3\,1/2}$	17	6440.554	8	*MB*	15522.324	$4459°_{3\,1/2}-19982_{4\,1/2}$	10
6369.325	5	*MB*	15695.911			6441.979	10	*MB*	15518.891	$12456_{3\,1/2}-27975°_{4\,1/2}$	18
6369.597	3	*MB*	15695.241			6445.348	6	*MB*	15510.779	$19946°_{1\,1/2}-35457_{1\,1/2}$	29
6371.115	60	*MB*	15691.502	$12704_{1\,1/2}-28396°_{2\,1/2}$	−13	6446.805	7	*MB*	15507.274	$13659°_{4\,1/2}-29166_{4\,1/2}$	6
6371.371	7	*MB*	15690.871			6447.515	8	*MB*	15505.566	$14387_{4\,1/2}-29892°_{3\,1/2}$	1
6376.944	4	*MB*	15677.158	$19136°_{2\,1/2}-34813_{2\,1/2}$	−19	6448.947	6	*MB*	15502.123	$14481°_{2\,1/2}-29984_{1\,1/2}$	1

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
6449.503	7	*MB*	15500.787	$11340°_{3\,1/2}-26841_{4\,1/2}$	1	6595.307	1	*MB*	15158.110		
6452.120	6	*MB*	15494.500	$15529_{2\,1/2}-31024°_{2\,1/2}$	0	6595.437	2	*MB*	15157.811	$7746°_{2\,1/2}-22903_{1\,1/2}$	22
6452.976	3	*MB*	15492.444	$31937_{3\,1/2}-47430°_{3\,1/2}$	−86	6596.937	5	*MB*	15154.364		
6455.888	10	*MB*	15485.456	$15859_{4\,1/2}-31344°_{3\,1/2}$	−8	6597.036	7	*MB*	15154.137	$11325°_{2\,1/2}-26479_{1\,1/2}$	−7
6459.122	7	*MB*	15477.703	$15565°_{2\,1/2}-31043_{2\,1/2}$	13	6597.567	5	*MB*	15152.917	$14739_{2\,1/2}-29892°_{3\,1/2}$	1
6459.251	6	*MB*	15477.394	$11340°_{3\,1/2}-26817_{2\,1/2}$	56	6597.679	2	*MB*	15152.660	$23508_{1\,1/2}-38661°_{1\,1/2}$	20
6460.018	4	*MB*	15475.556			6602.193	10	*MB*	15142.300	$18393_{3\,1/2}-33535°_{3\,1/2}$	−8
6460.561	3	*MB*	15474.256	$14276_{5\,1/2}-29750°_{5\,1/2}$	7	6606.859	30	*MB*	15131.606	$13217_{3\,1/2}-28349°_{3\,1/2}$	0
6462.168	4	*MB*	15470.407	$33079_{3\,1/2}-48549°_{4\,1/2}$	−70	6607.577	5	*MB*	15129.962	$12057°_{2\,1/2}-27187_{3\,1/2}$	22
6462.781	12	*MB*	15468.940	$17571_{4\,1/2}-33040°_{4\,1/2}$	−11	6608.464	6	*MB*	15127.931	$13268_{2\,1/2}-28396°_{2\,1/2}$	0
6464.284	7	*MB*	15465.343	$9634°_{1\,1/2}-25099_{1\,1/2}$	48	6609.728	15	*MB*	15125.038	$14625_{5\,1/2}-29750°_{5\,1/2}$	−5
6466.882	40	*MB*	15459.130	$14276_{5\,1/2}-29735°_{4\,1/2}$	15	6611.807	10	*MB*	15120.282	$10646_{5\,1/2}-25766°_{4\,1/2}$	−2
6468.966	12	*MB*	15454.150	$7746°_{2\,1/2}-23200_{2\,1/2}$	4	6614.450	10	*MB*	15114.241	$25361_{4\,1/2}-40475°_{3\,1/2}$	−9
6494.724	10	*MB*	15392.860	$14727_{1\,1/2}-30120°_{1\,1/2}$	−5	6615.546	3	*MB*	15111.737		
6496.354	5	*MB*	15388.997	$7878°_{3\,1/2}-23267_{3\,1/2}$	−25	6616.354	10	*MB*	15109.891	$14625_{5\,1/2}-29735°_{4\,1/2}$	−18
6500.793	4	*MB*	15378.489			6621.080	5	*MB*	15099.106	$11742°_{5\,1/2}-26841_{4\,1/2}$	−32
6502.835	4	*MB*	15373.660	$7202°_{2\,1/2}-22576_{2\,1/2}$	19	6624.408	10	*MB*	15091.521	$8175°_{2\,1/2}-23267_{3\,1/2}$	33
6503.265	25	*MB*	15372.644	$17000_{3\,1/2}-32372°_{4\,1/2}$	30	6626.047	3	*MB*	15087.788	$7202°_{2\,1/2}-22290_{1\,1/2}$	2
6507.157	25	*MB*	15363.449	$14387_{4\,1/2}-29750°_{5\,1/2}$	14	6626.510	10	*MB*	15086.733	$10274°_{3\,1/2}-25361_{4\,1/2}$	31
6513.590	50	*MB*	15348.276	$14387_{4\,1/2}-29735°_{4\,1/2}$	−24	6628.857	20	*MB*	15081.392	$13268_{2\,1/2}-28349°_{3\,1/2}$	28
6515.337	7	*MB*	15344.161	$11007°_{1\,1/2}-26351_{0\,1/2}$	49	6630.316	6	*MB*	15078.073		
6520.127	5	*MB*	15332.888	$27379_{5\,1/2}-42712°_{6\,1/2}$	27	6633.088	6	*MB*	15071.772	$15565°_{2\,1/2}-30637_{2\,1/2}$	35
6523.415	8	*MB*	15325.160	$14481°_{2\,1/2}-29807_{3\,1/2}$	12	6634.920	8	*MB*	15067.611		
6527.481	3	*MB*	15315.614	$14276_{5\,1/2}-29591°_{6\,1/2}$	39	6636.047	12	*MB*	15065.052	$14827_{3\,1/2}-29892°_{3\,1/2}$	−1
6533.107	5	*MB*	15302.425	$9198°_{3\,1/2}-24500_{2\,1/2}$	−4	6641.475	6	*MB*	15052.739	$23782_{2\,1/2}-38835°_{2\,1/2}$	−3
6533.945	3	*MB*	15300.462	$11949°_{3\,1/2}-27249_{2\,1/2}$	−17	6643.180	8	*MB*	15048.876	$12762°_{4\,1/2}-27811_{3\,1/2}$	21
6537.194	12	*MB*	15292.858	$17571_{4\,1/2}-32864°_{5\,1/2}$	−18	6647.376	9	*MB*	15039.377	$4910°_{5\,1/2}-19950_{6\,1/2}$	0
6537.493	15	*MB*	15292.159	$15859_{4\,1/2}-31151°_{5\,1/2}$	−11	6651.330	10	*MB*	15030.436		
6539.015	5	*MB*	15288.599			6652.725	60	*MB*	15027.285	$12326°_{6\,1/2}-27353_{7\,1/2}$	32
6558.600	8	*MB*	15242.946	$32802_{5\,1/2}-48045°_{6\,1/2}$	11	6652.967	20	*MB*	15026.738	$17171°_{5\,1/2}-32197_{4\,1/2}$	1
6567.893	8	*MB*	15221.378	$14727_{1\,1/2}-29948°_{2\,1/2}$	4	6654.707	20	*MB*	15022.809	$27706_{6\,1/2}-42729°_{5\,1/2}$	−6
6569.861	2	*MB*	15216.819	$4266°_{3\,1/2}-19483_{2\,1/2}$	−8	6656.900	10	*MB*	15017.860	$17300°_{3\,1/2}-32318_{3\,1/2}$	−4
6570.794	7	*MB*	15214.658	$4266°_{3\,1/2}-19481_{4\,1/2}$	15	6658.543	7	*MB*	15014.155	$12365°_{4\,1/2}-27379_{5\,1/2}$	12
6571.120	2	*MB*	15213.903			6659.143	8	*MB*	15012.802	$17976_{2\,1/2}-32989°_{3\,1/2}$	−2
6573.166	8	*MB*	15209.168	$14739_{2\,1/2}-29948°_{2\,1/2}$	15	6661.207	5	*MB*	15008.150	$19920°_{3\,1/2}-34928_{4\,1/2}$	−5
				$13117_{4\,1/2}-28327°_{5\,1/2}$	19					$2563°_{5\,1/2}-17571_{4\,1/2}$	−17
6575.442	9	*MB*	15203.903	$18704_{5\,1/2}-33908°_{4\,1/2}$	23	6662.085	6	*MB*	15006.172	$27706_{6\,1/2}-42712°_{6\,1/2}$	−6
6576.245	2	*MB*	15202.047	$15822_{3\,1/2}-31024°_{2\,1/2}$	30	6665.717	6	*MB*	14997.996	$5942°_{3\,1/2}-20940_{3\,1/2}$	−44
6576.774	8	*MB*	15200.824	$18393_{3\,1/2}-33594°_{2\,1/2}$	0	6665.812	10	*MB*	14997.782	$16133_{2\,1/2}-31130°_{3\,1/2}$	−6
6577.512	10	*MB*	15199.119	$12751°_{5\,1/2}-27950_{5\,1/2}$	10	6670.602	10	*MB*	14987.012	$14276_{5\,1/2}-29263°_{5\,1/2}$	−27
6578.376	4	*MB*	15197.122	$19136°_{2\,1/2}-34333_{2\,1/2}$	49	6675.528	30	*MB*	14975.953	$5964°_{3\,1/2}-20940_{3\,1/2}$	10
6580.390	7	*MB*	15192.471	$16152_{3\,1/2}-31344°_{3\,1/2}$	20	6677.342	4	*MB*	14971.885	$4511°_{2\,1/2}-19483_{2\,1/2}$	−82
6580.651	8	*MB*	15191.869	$14481°_{2\,1/2}-29673_{2\,1/2}$	29	6678.465	20	*MB*	14969.367		
6581.237	2	*MB*	15190.516			6679.148	7	*MB*	14967.837	$14481°_{2\,1/2}-29449_{1\,1/2}$	−10
6584.565	6	*MB*	15182.838	$12751°_{5\,1/2}-27934_{4\,1/2}$	−17	6684.828	10	*MB*	14955.119	$9198°_{3\,1/2}-24153_{3\,1/2}$	−20
6584.849	4	*MB*	15182.183	$33148_{2\,1/2}-48330°_{3\,1/2}$	−17	6686.027	4	*MB*	14952.437	$32507_{1\,1/2}-47459°_{2\,1/2}$	−14
6585.794	6	*MB*	15180.005			6691.726	5	*MB*	14939.703	$9723°_{4\,1/2}-24663_{4\,1/2}$	−16
6589.287	2	*MB*	15171.958	$12762°_{4\,1/2}-27934_{4\,1/2}$	−38	6692.348	5	*MB*	14938.314	$17475°_{4\,1/2}-32413_{3\,1/2}$	−8
6589.340	3	*MB*	15171.836	$14963°_{5\,1/2}-30134_{5\,1/2}$	26	6694.919	3	*MB*	14932.578	$18147°_{2\,1/2}-33079_{3\,1/2}$	71
6594.258	6	*MB*	15160.521	$4322°_{2\,1/2}-19483_{2\,1/2}$	4	6702.324	6	*MB*	14916.080	$16159°_{3\,1/2}-31075_{4\,1/2}$	13

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
6704.521	40	*MB*	14911.192	$19950_{6\,1/2}-34861°_{5\,1/2}$	6	6828.588	3	*MB*	14640.276	$12260°_{3\,1/2}-26900_{3\,1/2}$	10
6705.514	12	*MB*	14908.984	$17976_{2\,1/2}-32885°_{2\,1/2}$	30	6829.378	10	*MB*	14638.582	$4844°_{1\,1/2}-19483_{2\,1/2}$	1
6706.040	25	*MB*	14907.814	$14827_{3\,1/2}-29735°_{4\,1/2}$	24	6829.729	25	*MB*	14637.830	$14625_{5\,1/2}-29263°_{5\,1/2}$	−4
6708.097	8	*MB*	14903.243	$5651°_{5\,1/2}-20554_{5\,1/2}$	4	6834.235	20	*MB*	14628.179	$12751°_{5\,1/2}-27379_{5\,1/2}$	12
6713.675	9	*MB*	14890.861	$16133_{2\,1/2}-31024°_{2\,1/2}$	−20	6834.620	3	*MB*	14627.355	$10035°_{5\,1/2}-24663_{4\,1/2}$	11
6716.405	12	*MB*	14884.808	$15235_{1\,1/2}-30120°_{1\,1/2}$	−18	6836.641	4	*MB*	14623.031	$8280°_{2\,1/2}-22903_{1\,1/2}$	3
6718.858	5	*MB*	14879.374	$19982_{4\,1/2}-34861°_{5\,1/2}$	35	6839.411	7	*MB*	14617.108	$15517°_{6\,1/2}-30134_{5\,1/2}$	−29
6719.241	6	*MB*	14878.526	$23782_{2\,1/2}-38661°_{1\,1/2}$	−2	6842.919	5	*MB*	14609.615	$15510_{0\,1/2}-30120°_{1\,1/2}$	−4
6720.277	40	*MB*	14876.232	$14387_{4\,1/2}-29263°_{5\,1/2}$	6	6844.482	20	*MB*	14606.279	$16545_{5\,1/2}-31151°_{5\,1/2}$	14
6722.321	10	*MB*	14871.709	$16152_{3\,1/2}-31024°_{2\,1/2}$	10	6846.788	20	*MB*	14601.359	$15134_{4\,1/2}-29735°_{4\,1/2}$	−3
6728.674	30b	*MB*	14857.667	$13117_{4\,1/2}-27975°_{4\,1/2}$	−29	6847.150	2	*CC*	14600.588	$15565°_{2\,1/2}-30166_{3\,1/2}$	−48
6733.218	25	*MB*	14847.641	$15822_{3\,1/2}-30669°_{4\,1/2}$	−1	6849.633	20	*MB*	14595.295	$28117_{7\,1/2}-42712°_{6\,1/2}$	4
6735.245	7	*MB*	14843.172	$17475°_{4\,1/2}-32318_{3\,1/2}$	20	6854.188	4	*MB*	14585.595	$5969°_{5\,1/2}-20554_{5\,1/2}$	7
6737.420	7	*MB*	14838.380	$17300°_{3\,1/2}-32138_{2\,1/2}$	−7	6861.746	7	*MB*	14569.530	$16454_{2\,1/2}-31024°_{2\,1/2}$	9
6738.351	5	*MB*	14836.330	$8804°_{4\,1/2}-23640_{4\,1/2}$	−8	6867.237	7	*MB*	14557.880	$12260°_{3\,1/2}-26817_{2\,1/2}$	33
6741.222	5	*MB*	14830.012	$7746°_{2\,1/2}-22576_{2\,1/2}$	27	6869.552	7	*MB*	14552.975	$13784°_{1\,1/2}-28337_{2\,1/2}$	−4
6742.311	3	*MB*	14827.617	$0°_{3\,1/2}-14827_{3\,1/2}$	−5	6872.177	10	*MB*	14547.416	$14481°_{2\,1/2}-29029_{1\,1/2}$	−6
6743.817	15	*MB*	14824.305	$27905_{4\,1/2}-42729°_{5\,1/2}$	15	6873.436	8	*MB*	14544.751	$5437°_{3\,1/2}-19982_{4\,1/2}$	−13
6744.081	9	*MB*	14823.725	$6549°_{2\,1/2}-21373_{1\,1/2}$	10	6873.844	9	*MB*	14543.888	$15576_{1\,1/2}-30120°_{1\,1/2}$	50
6744.713	35	*MB*	14822.336	$13527_{4\,1/2}-28349°_{3\,1/2}$	−6	6878.252	9	*MB*	14534.567	$12365°_{4\,1/2}-26900_{3\,1/2}$	19
6748.152	5	*MB*	14814.782	$5969°_{5\,1/2}-20783_{5\,1/2}$	−2	6898.450	40	*MB*	14492.012	$18393_{3\,1/2}-32885°_{2\,1/2}$	−27
6750.177	12	*MB*	14810.338	$15859_{4\,1/2}-30669°_{4\,1/2}$	0	6905.301	10	*MB*	14477.634	$16159°_{3\,1/2}-30637_{2\,1/2}$	13
6754.964	6	*MB*	14799.843	$13527_{4\,1/2}-28327°_{5\,1/2}$	11	6907.818	30	*MB*	14472.359	$20554_{5\,1/2}-35026°_{4\,1/2}$	11
6755.133	10b	*MB*	14799.472	$14481°_{2\,1/2}-29281_{2\,1/2}$	28					$5010°_{2\,1/2}-19483_{2\,1/2}$	4
				$3593°_{4\,1/2}-18393_{3\,1/2}$	27	6912.233	8	*MB*	14463.115	$8804°_{4\,1/2}-23267_{3\,1/2}$	−11
6755.959	4	*MB*	14797.663	$8402°_{3\,1/2}-23200_{2\,1/2}$	0	6912.465	5	*MB*	14462.629	$17475°_{4\,1/2}-31937_{3\,1/2}$	0
6757.113	9	*MB*	14795.136	$16545_{5\,1/2}-31340°_{6\,1/2}$	12	6914.060	8	*MB*	14459.293		
6760.240	2	*CC*	14788.292			6915.668	8	*MB*	14455.931	$17475°_{4\,1/2}-31930_{4\,1/2}$	18
6760.940	3	*CC*	14786.761			6918.966	7	*MB*	14449.041	$1410°_{4\,1/2}-15859_{4\,1/2}$	−17
6763.291	5	*MB*	14781.621	$13515°_{3\,1/2}-28297_{3\,1/2}$	1	6919.272	30	*MB*	14448.401	$13527_{4\,1/2}-27975°_{4\,1/2}$	22
6769.308	9	*MB*	14768.482			6928.033	8	*MB*	14430.131	$9723°_{4\,1/2}-24153_{3\,1/2}$	0
6769.735	10	*MB*	14767.551	$14276_{5\,1/2}-29043°_{6\,1/2}$	−4	6931.348	10	*MB*	14423.229	$6517°_{2\,1/2}-20940_{3\,1/2}$	9
6770.965	6	*MB*	14764.868			6933.686	10	*MB*	14418.366	$14625_{5\,1/2}-29043°_{6\,1/2}$	15
6772.313	9	*MB*	14761.929	$27950_{5\,1/2}-42712°_{6\,1/2}$	10	6935.267	5	*MB*	14415.079	$10684°_{0\,1/2}-25099_{1\,1/2}$	38
6773.337	15	*MB*	14759.697	$17171°_{5\,1/2}-31930_{4\,1/2}$	7	6936.682	10	*MB*	14412.138	$10088°_{1\,1/2}-24500_{2\,1/2}$	23
6774.276	50	*MB*	14757.652	$13217_{3\,1/2}-27975°_{4\,1/2}$	9	6943.557	10	*MB*	14397.869	$3995°_{3\,1/2}-18393_{3\,1/2}$	2
6775.323	4	*MB*	14755.371	$16268_{1\,1/2}-31024°_{2\,1/2}$	−31	6944.079	10	*MB*	14396.786	$17171°_{5\,1/2}-31568_{4\,1/2}$	12
6776.850	1	*CC*	14752.046	$12762°_{4\,1/2}-27514_{3\,1/2}$	27	6946.898	6	*MB*	14390.944	$6549°_{2\,1/2}-20940_{3\,1/2}$	13
6777.891	10	*MB*	14749.781	$29673_{2\,1/2}-44423°_{1\,1/2}$	−23	6948.758	6	*MB*	14387.092	$0°_{3\,1/2}-14387_{4\,1/2}$	−19
6782.482	2	*MB*	14739.797	$0°_{3\,1/2}-14739_{2\,1/2}$	36	6949.342	4	*MB*	14385.883	$10114°_{2\,1/2}-24500_{2\,1/2}$	10
6785.021	4	*MB*	14734.281	$8169°_{1\,1/2}-22903_{1\,1/2}$	5	6954.762	15	*MB*	14374.672	$19920°_{3\,1/2}-34295_{4\,1/2}$	35
6791.410	2	*CC*	14720.420	$13675_{2\,1/2}-28396°_{2\,1/2}$	−7	6959.727	9	*MB*	14364.417	$5118°_{2\,1/2}-19483_{2\,1/2}$	−1
6792.620	4	*CC*	14717.798	$18393_{3\,1/2}-33111°_{3\,1/2}$	−37	6960.372	5	*MB*	14363.086	$15529_{2\,1/2}-29892°_{3\,1/2}$	−14
6793.538	7	*MB*	14715.809	$18147°_{2\,1/2}-32862_{3\,1/2}$	47	6963.145	25	*MB*	14357.366	$20940_{3\,1/2}-35298°_{2\,1/2}$	16
6794.681	15	*MB*	14713.333	$15235_{1\,1/2}-29948°_{2\,1/2}$	−1	6969.228	12	*MB*	14344.835	$17000_{3\,1/2}-31344°_{3\,1/2}$	14
6801.838	5	*MB*	14697.852	$7878°_{3\,1/2}-22576_{2\,1/2}$	10	6973.503	70	*MB*	14336.041	$18704_{5\,1/2}-33040°_{4\,1/2}$	1
6807.833	50b	*MB*	14684.909	$20940_{3\,1/2}-35625°_{3\,1/2}$	48	6976.042	7	*MB*	14330.823	$5651°_{5\,1/2}-19982_{4\,1/2}$	−6
6809.062	12	*MB*	14682.259	$24153_{3\,1/2}-38835°_{2\,1/2}$	−8	6983.290	9	*MB*	14315.949		
6811.776	10	*MB*	14676.409	$16454_{2\,1/2}-31130°_{3\,1/2}$	−18	6983.821	50	*MB*	14314.861	$13117_{4\,1/2}-27432°_{4\,1/2}$	1
6812.963	9	*MB*	14673.852	$13675_{2\,1/2}-28349°_{3\,1/2}$	−7	6986.074	60	*MB*	14310.244	$15281_{6\,1/2}-29591°_{6\,1/2}$	−26

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
6987.676	9	*MB*	14306.964	$20554_{5/2}$ −$34861°_{5/2}$	34	7190.008	10	*MB*	13904.358	$17171°_{5/2}$−$31075_{4/2}$	0
6992.564	12	*MB*	14296.963	$31568_{4/2}$ −$45864°_{5/2}$	32	7196.814	30	*MB*	13891.209	$15859_{4/2}$ −$29750°_{5/2}$	25
6995.205	4	*MB*	14291.565	$13659°_{4/2}$−$27950_{5/2}$	3	7198.338	5	*MB*	13888.268	$12057°_{2/2}$−$25945_{3/2}$	−20
6999.045	10	*MB*	14283.724	$32413_{3/2}$ −$46697°_{4/2}$	−13					$13012°_{2/2}$−$26900_{3/2}$	9
7001.624	4	*MB*	14278.463	$1873°_{3/2}$−$16152_{3/2}$	20	7201.557	50	*MB*	13882.060	$4511°_{2/2}$−$18393_{3/2}$	−9
7002.351	4	*MB*	14276.980			7204.668	10	*MB*	13876.066	$15859_{4/2}$ −$29735°_{4/2}$	16
7010.420	4	*MB*	14260.548	$13117_{4/2}$ −$27378°_{5/2}$	−44	7207.672	10	*MB*	13870.282	$4523°_{4/2}$−$18393_{3/2}$	−11
7014.546	4	*MB*	14252.160	$0°_{3/2}$−$14252_{3/2}$	−17	7208.978	2	*MB*	13867.770	$3703°_{3/2}$−$17571_{4/2}$	−36
7021.356	4	*MB*	14238.336			7211.000	30	*MB*	13863.881	$38194°_{4/2}$−$52058_{4/2}$	22
7025.901	10	*MB*	14229.126	$15565°_{2/2}$−$29794_{3/2}$	29	7215.176	12	*MB*	13855.857	$14481°_{2/2}$−$28337_{2/2}$	−26
7027.560	4	*MB*	14225.767	$10274°_{3/2}$−$24500_{2/2}$	−17	7215.454	10	*MB*	13855.323	$13659°_{4/2}$−$27514_{3/2}$	−7
7031.030	10	*CC*	14218.746			7217.555	30	*MB*	13851.290	$27249_{2/2}$ −$41100°_{2/2}$	27
7038.572	5	*MB*	14203.510	$14963°_{5/2}$−$29166_{4/2}$	14					$13527_{4/2}$ −$27378°_{5/2}$	14
7054.761	5	*MB*	14170.917	$12097_{3/2}$ −$26268°_{3/2}$	−9	7235.713	15	*MB*	13816.530		
7058.678	15	*MB*	14163.053	$2382°_{4/2}$−$16545_{5/2}$	30	7238.382	90	*MB*	13811.436	$12456_{3/2}$ −$26268°_{3/2}$	−20
				$5819°_{4/2}$−$19982_{4/2}$	−20						
						7264.272	50	*MB*	13762.212	$15281_{6/2}$ −$29043°_{6/2}$	−39
7061.747	50	*MB*	14156.898	$15593_{6/2}$ −$29750°_{5/2}$	11	7274.554	30	*MB*	13742.760	$17300°_{3/2}$−$31043_{2/2}$	−39
7064.115	5	*MB*	14152.153	$13659°_{4/2}$−$27811_{3/2}$	−13	7284.781	50	*MB*	13723.467	$14252_{3/2}$ −$27975°_{4/2}$	26
7068.190	1	*CC*	14143.994	$14252_{3/2}$ −$28396°_{2/2}$	22	7297.635	25	*MB*	13699.295	$14276_{5/2}$ −$27975°_{4/2}$	−25
7079.892	4	*MB*	14120.616	$8169°_{1/2}$−$22290_{1/2}$	0	7301.417	40	*MB*	13692.199	$14404°_{7/2}$−$28096_{8/2}$	19
7084.420	2	*CC*	14111.591			7306.990	5	*MB*	13681.756	$7259°_{3/2}$−$20940_{3/2}$	−7
7084.754	10	*MB*	14110.925	$19483_{2/2}$ −$33594°_{2/2}$	−1	7313.456	90	*MB*	13669.660	$15593_{6/2}$ −$29263°_{5/2}$	−17
7086.348	70	*MB*	14107.751	$17232_{7/2}$ −$31340°_{6/2}$	10	7314.031	7	*MB*	13668.585	$14727_{1/2}$ −$28396°_{2/2}$	−24
7091.551	3	*MB*	14097.401	$14252_{3/2}$ −$28349°_{3/2}$	−2	7317.608	10	*MB*	13661.904	$5819°_{4/2}$−$19481_{4/2}$	−22
7093.747	2	*MB*	14093.037	$17475°_{4/2}$−$31568_{4/2}$	41	7320.980	1	*CC*	13655.611	$1873°_{3/2}$−$15529_{2/2}$	−30
7095.469	5	*MB*	14089.616	$12751°_{5/2}$−$26841_{4/2}$	15	7328.656	6	*MB*	13641.308		
7097.233	6	*MB*	14086.114	$20940_{3/2}$ −$35026°_{4/2}$	10	7330.501	30	*MB*	13637.875	$987°_{4/2}$−$14625_{5/2}$	−16
7105.045	10	*MB*	14070.627	$15822_{3/2}$ −$29892°_{3/2}$	9	7332.054	15	*MB*	13634.986	$16159°_{3/2}$−$29794_{3/2}$	5
				$4322°_{2/2}$−$18393_{3/2}$	8	7332.576	5	*MB*	13634.016	$2634°_{2/2}$−$16268_{1/2}$	9
7110.250	3	*CC*	14060.327	$19946°_{1/2}$−$34006_{0/2}$	73	7334.682	80	*MB*	13630.101	$19481_{4/2}$ −$33111°_{3/2}$	−21
7111.900	7	*MB*	14057.065			7336.124	4	*MB*	13627.422	$7746°_{2/2}$−$21373_{1/2}$	−15
7115.077	30	*MB*	14050.788	$14276_{5/2}$ −$28327°_{5/2}$	15	7340.433	12	*MB*	13619.422	$11742°_{5/2}$−$25361_{4/2}$	−6
7118.720	2	*CC*	14043.597	$5437°_{3/2}$−$19481_{4/2}$	−20	7343.024	20	*MB*	13614.617	$16192°_{4/2}$−$29807_{3/2}$	5
7120.857	10	*MB*	14039.383	$5942°_{3/2}$−$19982_{4/2}$	−5	7348.284	20	*MB*	13604.871	$10035°_{5/2}$−$23640_{4/2}$	19
7121.262	9	*MB*	14038.584	$10114°_{2/2}$−$24153_{3/2}$	2	7360.100	2	*MB*	13583.030	$16152_{3/2}$ −$29735°_{4/2}$	−5
7132.071	25	*MB*	14017.308	$5964°_{3/2}$−$19982_{4/2}$	18	7361.695	40	*MB*	13580.087	$17571_{4/2}$ −$31151°_{5/2}$	−45
7132.529	8	*MB*	14016.408	$24819_{3/2}$ −$38835°_{2/2}$	9	7365.301	50	*MB*	13573.438	$18393_{3/2}$ −$31966°_{2/2}$	17
7134.177	9	*MB*	14013.171	$5969°_{5/2}$−$19982_{4/2}$	−8	7367.984	5	*MB*	13568.496	$14827_{3/2}$ −$28396°_{2/2}$	−30
7142.820	8	*MB*	13996.214	$11949°_{3/2}$−$25945_{3/2}$	8	7372.976	15	*MB*	13559.309	$19481_{4/2}$ −$33040°_{4/2}$	−3
7150.228	80	*MB*	13981.714	$15281_{6/2}$ −$29263°_{5/2}$	−21	7376.177	80	*MB*	13553.425	$19982_{4/2}$ −$33535°_{3/2}$	−23
7154.207	10	*MB*	13973.937	$11387°_{3/2}$−$25361_{4/2}$	−5	7390.457	50	*MB*	13527.237	$0°_{3/2}$−$13527_{4/2}$	−1
7156.993	70	*MB*	13968.498			7396.543	5	*MB*	13516.106	$5964°_{3/2}$−$19481_{4/2}$	−37
7165.468	7	*MB*	13951.977			7402.091	40	*MB*	13505.976	$19483_{2/2}$ −$32989°_{3/2}$	−16
7167.916	8	*MB*	13947.212	$15803_{4/2}$ −$29750°_{5/2}$	−24	7406.180	10	*MB*	13498.519	$2634°_{2/2}$−$16133_{2/2}$	−8
7175.000	30	*MB*	13933.442	$4459°_{3/2}$−$18393_{3/2}$	−12	7411.345	9	*MB*	13489.112	$19920°_{3/2}$−$33409_{3/2}$	28
7175.716	30	*MB*	13932.051	$15803_{4/2}$ −$29735°_{4/2}$	−51	7412.524	9	*MB*	13486.966		
7178.515	3	*MB*	13926.619			7417.951	50	*MB*	13477.099	$2382°_{4/2}$−$15859_{4/2}$	−17
7178.845	30	*MB*	13925.979	$19982_{4/2}$ −$33908°_{4/2}$	−26	7425.198	10	*MB*	13463.946	$15565°_{2/2}$−$29029_{1/2}$	13
7186.205	70	*MB*	13911.716	$18704_{5/2}$ −$32616°_{4/2}$	10					$31130°_{3/2}$−$44594_{2/2}$	1
7189.408	60	*MB*	13905.518	$13527_{4/2}$ −$27432°_{4/2}$	−24	7427.354	40	*MB*	13460.038	$15803_{4/2}$ −$29263°_{5/2}$	10

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
7438.988	60	*MB*	13438.987	$3793°_{6\,1/2}-17232_{7\,1/2}$	−30	7689.168	80	*MB*	13001.730	$12751°_{5\,1/2}-25753_{6\,1/2}$	19
7448.930	5	*MB*	13421.050	$2382°_{4\,1/2}-15803_{4\,1/2}$	−13	7690.194	60	*MB*	12999.995	$13268_{2\,1/2}-26268°_{3\,1/2}$	10
7458.418	50	*MB*	13403.977	$15859_{4\,1/2}-29263°_{5\,1/2}$	2	7695.271	3	*MB*	12991.418	$14387_{4\,1/2}-27378°_{5\,1/2}$	15
7460.920	3	*CC*	13399.482	$987°_{4\,1/2}-14387_{4\,1/2}$	−18	7701.503	3	*MB*	12980.906	$2595°_{1\,1/2}-15576_{1\,1/2}$	−17
7470.420	10	*MB*	13382.443	$5010°_{2\,1/2}-18393_{3\,1/2}$	−13	7707.060	7	*MB*	12971.546	$14963°_{5\,1/2}-27934_{4\,1/2}$	8
7473.815	10	*MB*	13376.364			7710.583	6	*MB*	12965.619	$6517°_{2\,1/2}-19483_{2\,1/2}$	13
7474.430	2	*CC*	13375.263			7711.742	15	*MB*	12963.671	$17171°_{5\,1/2}-30134_{5\,1/2}$	6
7486.574	90	*MB*	13353.567	$20554_{5\,1/2}-33908°_{4\,1/2}$	−29	7712.808	3	*MB*	12961.879	$6521°_{1\,1/2}-19483_{2\,1/2}$	−13
7491.981	10	*MB*	13343.930	$6638°_{4\,1/2}-19982_{4\,1/2}$	1	7717.680	20	*MB*	12953.697	$1873°_{3\,1/2}-14827_{3\,1/2}$	8
7492.283	5	*MB*	13343.392	$19483_{2\,1/2}-32826°_{1\,1/2}$	−50	7724.609	40	*MB*	12942.077	$14963°_{5\,1/2}-27905_{4\,1/2}$	20
7502.341	4	*MB*	13325.503	$13515°_{3\,1/2}-26841_{4\,1/2}$	−27	7724.690	4	*CC*	12941.941	$19920°_{3\,1/2}-32862_{3\,1/2}$	−12
7504.058	10	*MB*	13322.454	$11340°_{3\,1/2}-24663_{4\,1/2}$	−2	7729.469	6	*MB*	12933.940	$2595°_{1\,1/2}-15529_{2\,1/2}$	8
7511.309	50	*MB*	13309.594	$12456_{3\,1/2}-25766°_{4\,1/2}$	−14	7729.857	20	*MB*	12933.290	$13012°_{2\,1/2}-25945_{3\,1/2}$	−10
7527.680	4	*CC*	13280.648							$6549°_{2\,1/2}-19483_{2\,1/2}$	−26
7533.700	2	*CC*	13270.036			7735.945	20	*MB*	12923.112	$7059°_{4\,1/2}-19982_{4\,1/2}$	−2
7557.301	7	*MB*	13228.595	$10924°_{4\,1/2}-24153_{3\,1/2}$	5	7740.719	20	*MB*	12915.142	$2595°_{1\,1/2}-15510_{0\,1/2}$	0
7557.792	15	*MB*	13227.736	$7713°_{4\,1/2}-20940_{3\,1/2}$	−13	7740.862	5	*MB*	12914.904	$15434_{2\,1/2}-28349°_{3\,1/2}$	21
7564.954	30	*MB*	13215.212	$1410°_{4\,1/2}-14625_{5\,1/2}$	13	7741.432	70	*MB*	12913.953	$19950_{6\,1/2}-32864°_{5\,1/2}$	15
7577.685	60	*MB*	13193.010	$15134_{4\,1/2}-28327°_{5\,1/2}$	−10	7746.648	30	*MB*	12905.257	$3363°_{2\,1/2}-16268_{1\,1/2}$	12
7580.906	10	*MB*	13187.405	$2634°_{2\,1/2}-15822_{3\,1/2}$	12	7752.127	4	*MB*	12896.136	$18147°_{2\,1/2}-31043_{2\,1/2}$	31
7583.573	6	*MB*	13182.767	$12762°_{4\,1/2}-25945_{3\,1/2}$	12	7752.864	40	*MB*	12894.910	$2634°_{2\,1/2}-15529_{2\,1/2}$	1
7584.819	30	*MB*	13180.601	$14252_{3\,1/2}-27432°_{4\,1/2}$	−2	7758.701	6	*MB*	12885.209	$31766_{1\,1/2}-44651°_{1\,1/2}$	16
7588.061	10	*MB*	13174.970	$11325°_{2\,1/2}-24500_{2\,1/2}$	−4					$5819°_{4\,1/2}-18704_{5\,1/2}$	10
7589.618	5	*MB*	13172.267	$16192°_{4\,1/2}-29364_{3\,1/2}$	−6	7785.102	20	*MB*	12841.513	$7713°_{4\,1/2}-20554_{5\,1/2}$	6
7593.312	10	*MB*	13165.859	$12326°_{6\,1/2}-25492_{5\,1/2}$	25	7791.267	3	*MB*	12831.352	$13436_{2\,1/2}-26268°_{3\,1/2}$	3
7596.364	10	*MB*	13160.569	$15235_{1\,1/2}-28396°_{2\,1/2}$	−1	7795.464	5	*MB*	12824.444	$10684°_{0\,1/2}-23508_{1\,1/2}$	5
7611.299	10	*MB*	13134.746	$34295_{4\,1/2}-47430°_{3\,1/2}$	12	7809.344	9	*MB*	12801.650	$19136°_{2\,1/2}-31937_{3\,1/2}$	21
				$4165_{4\,1/2}-17300°_{3\,1/2}$	−13	7828.177	4	*MB*	12770.852	$17475°_{4\,1/2}-30245_{4\,1/2}$	−2
7614.370	2	*CC*	13129.448			7828.639	10	*MB*	12770.099	$19946°_{1\,1/2}-32716_{2\,1/2}$	20
7616.120	40	*MB*	13126.432	$12365°_{4\,1/2}-25492_{5\,1/2}$	−12	7828.845	4	*MB*	12769.763	$3363°_{2\,1/2}-16133_{2\,1/2}$	−3
7617.299	20	*MB*	13124.400	$20783_{5\,1/2}-33908°_{4\,1/2}$	0	7831.790	10	*MB*	12764.961	$8175°_{2\,1/2}-20940_{3\,1/2}$	−14
7618.785	10	*MB*	13121.840	$16159°_{3\,1/2}-29281_{2\,1/2}$	2	7838.383	80	*MB*	12754.224	$19481_{4\,1/2}-32235°_{3\,1/2}$	25
7621.060	10	*MB*	13117.923	$0°_{3\,1/2}-13117_{4\,1/2}$	1	7839.727	4	*MB*	12752.038	$19483_{2\,1/2}-32235°_{3\,1/2}$	24
7621.742	10	*MB*	13116.749	$15517°_{6\,1/2}-28634_{5\,1/2}$	5	7844.940	90	*MB*	12743.564	$14963°_{5\,1/2}-27706_{6\,1/2}$	33
7630.197	30	*MB*	13102.215	$14276_{5\,1/2}-27378°_{5\,1/2}$	−1	7846.835	8	*MB*	12740.486	$12751°_{5\,1/2}-25492_{5\,1/2}$	17
7634.357	6	*MB*	13095.075	$2140°_{0\,1/2}-15235_{1\,1/2}$	−11	7848.581	6	*MB*	12737.652	$18393_{3\,1/2}-31130°_{3\,1/2}$	−3
7635.756	10	*MB*	13092.676	$8280°_{2\,1/2}-21373_{1\,1/2}$	0					$17171°_{5\,1/2}-29908_{4\,1/2}$	−6
7636.666	10	*MB*	13091.116	$6389°_{4\,1/2}-19481_{4\,1/2}$	18	7850.015	90	*MB*	12735.325	$5969°_{5\,1/2}-18704_{5\,1/2}$	19
				$3363°_{2\,1/2}-16454_{2\,1/2}$	−11	7851.185	80	*MB*	12733.427	$15593_{6\,1/2}-28327°_{5\,1/2}$	16
7648.586	9	*MB*	13070.714	$7713°_{4\,1/2}-20783_{5\,1/2}$	11	7853.515	7	*MB*	12729.650	$12762°_{4\,1/2}-25492_{5\,1/2}$	40
7658.022	9	*MB*	13054.609	$10454°_{1\,1/2}-23508_{1\,1/2}$	1	7857.542	100	*MB*	12723.126	$7259°_{3\,1/2}-19982_{4\,1/2}$	14
7658.992	10	*MB*	13052.955	$5651°_{5\,1/2}-18704_{5\,1/2}$	0	7877.057	10	*MB*	12691.605	$19946°_{1\,1/2}-32638_{1\,1/2}$	8
7660.617	20	*MB*	13050.187	$13217_{3\,1/2}-26268°_{3\,1/2}$	−39	7889.761	4	*MB*	12671.169	$8702°_{1\,1/2}-21373_{1\,1/2}$	−9
7662.710	40	*MB*	13046.622	$16545_{5\,1/2}-29591°_{6\,1/2}$	18	7896.469	4	*MB*	12660.405	$4910°_{5\,1/2}-17571_{4\,1/2}$	−32
7663.388	60	*MB*	13045.468	$15281_{6\,1/2}-28327°_{5\,1/2}$	0	7898.958	70	*MB*	12656.416	$7293°_{6\,1/2}-19950_{6\,1/2}$	14
7668.416	5	*MB*	13036.914	$6913°_{6\,1/2}-19950_{6\,1/2}$	−33	7900.874	10	*MB*	12653.347	$20940_{3\,1/2}-33594°_{2\,1/2}$	34
7670.633	4	*MB*	13033.146	$13784°_{1\,1/2}-26817_{2\,1/2}$	44	7903.929	30	*MB*	12648.456	$13117_{4\,1/2}-25766°_{4\,1/2}$	23
7670.766	20	*MB*	13032.920			7909.260	20	*MB*	12639.931	$2595°_{1\,1/2}-15235_{1\,1/2}$	−3
7672.250	20	*MB*	13030.399	$2563°_{5\,1/2}-15593_{6\,1/2}$	−27	7913.089	10	*MB*	12633.814	$19982_{4\,1/2}-32616°_{4\,1/2}$	−17
7675.322	8	*MB*	13025.184			7915.015	7	*MB*	12630.740	$18393_{3\,1/2}-31024°_{2\,1/2}$	−8

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
7926.005	4	*MB*	12613.227			8224.288	30	*MB*	12155.766	$3703°_{3\,1/2}-15859_{4\,1/2}$	−2
7927.340	3	*MB*	12611.103			8229.206	1	*MB*	12148.501		
7934.496	80	*MB*	12599.729	$15517°_{6\,1/2}-28117_{7\,1/2}$	−17	8233.411	9	*MB*	12142.296	$16192°_{4\,1/2}-28334_{4\,1/2}$	7
7934.922	15	*MB*	12599.053	$12762°_{4\,1/2}-25361_{4\,1/2}$	20	8236.501	10	*MB*	12137.741	$3995°_{3\,1/2}-16133_{2\,1/2}$	7
7939.064	30	*MB*	12592.479	$13675_{2\,1/2}-26268°_{3\,1/2}$	−1	8240.472	20	*MB*	12131.892	$2595°_{1\,1/2}-14727_{1\,1/2}$	−3
7960.076	4	*MB*	12559.239	$12260°_{3\,1/2}-24819_{3\,1/2}$	−6	8241.550	150	*MB*	12130.305	$987°_{4\,1/2}-13117_{4\,1/2}$	−5
7960.299	10	*MB*	12558.888	$10641°_{2\,1/2}-23200_{2\,1/2}$	0	8247.247	3	*MB*	12121.926	$10454°_{1\,1/2}-22576_{2\,1/2}$	28
7964.180	10	*MB*	12552.768	$2581°_{4\,1/2}-15134_{4\,1/2}$	−24	8249.598	20	*MB*	12118.471	$3703°_{3\,1/2}-15822_{3\,1/2}$	7
7966.960	25	*MB*	12548.387	$13217_{3\,1/2}-25766°_{4\,1/2}$	9	8250.648	100	*MB*	12116.929	$1410°_{4\,1/2}-13527_{4\,1/2}$	−5
7972.536	40	*MB*	12539.611	$987°_{4\,1/2}-13527_{4\,1/2}$	−16	8251.104	4	*MB*	12116.260	$15859_{4\,1/2}-27975°_{4\,1/2}$	4
7973.147	1	*MB*	12538.650			8258.712	10	*MB*	12105.098	$2634°_{2\,1/2}-14739_{2\,1/2}$	3
7973.446	4	*MB*	12538.180	$8402°_{3\,1/2}-20940_{3\,1/2}$	9	8262.392	3	*MB*	12099.707	$3703°_{3\,1/2}-15803_{4\,1/2}$	−8
7989.391	10	*MB*	12513.157	$1873°_{3\,1/2}-14387_{4\,1/2}$	−20	8263.405	20	*MB*	12098.223	$2641°_{3\,1/2}-14739_{2\,1/2}$	21
7997.099	5	*MB*	12501.096	$11007°_{1\,1/2}-23508_{1\,1/2}$	15	8264.290	5	*MB*	12096.928	$15281_{6\,1/2}-27378°_{5\,1/2}$	15
7998.690	6	*MB*	12498.610	$16545_{5\,1/2}-29043°_{6\,1/2}$	25	8264.670	5	*MB*	12096.371	$12057°_{2\,1/2}-24153_{3\,1/2}$	13
8002.560	9	*CC*	12492.565	$19920°_{3\,1/2}-32413_{3\,1/2}$	32	8268.451	20	*MB*	12090.840		
8002.690	10	*CC*	12492.362	$32638_{1\,1/2}-45130°_{2\,1/2}$	−1	8281.854	4	*MB*	12071.273	$3363°_{2\,1/2}-15434_{2\,1/2}$	1
8005.766	4	*MB*	12487.563	$10088°_{1\,1/2}-22576_{2\,1/2}$	33	8291.851	5	*MB*	12056.719	$12762°_{4\,1/2}-24819_{3\,1/2}$	26
8017.806	6	*MB*	12468.811	$10798°_{2\,1/2}-23267_{3\,1/2}$	15	8305.280	8	*MB*	12037.225		
8024.355	2	*MB*	12458.634	$3363°_{2\,1/2}-15822_{3\,1/2}$	2	8307.273	3	*MB*	12034.337	$12466°_{1\,1/2}-24500_{2\,1/2}$	11
8025.570	80	*MB*	12456.748	$0°_{3\,1/2}-12456_{3\,1/2}$	2	8312.384	15	*MB*	12026.937	$4165_{4\,1/2}-16192°_{4\,1/2}$	21
8030.703	30	*MB*	12448.786	$3703°_{3\,1/2}-16152_{3\,1/2}$	3	8327.669	50	*MB*	12004.863	$2382°_{4\,1/2}-14387_{4\,1/2}$	−2
8032.900	10	*MB*	12445.381	$2382°_{4\,1/2}-14827_{3\,1/2}$	5	8328.711	4	*MB*	12003.361	$6389°_{4\,1/2}-18393_{3\,1/2}$	−23
8034.018	8	*MB*	12443.650	$12057°_{2\,1/2}-24500_{2\,1/2}$	1	8338.603	4	*MB*	11989.121	$5010°_{2\,1/2}-17000_{3\,1/2}$	−15
8040.835	12	*MB*	12433.100	$15517°_{6\,1/2}-27950_{5\,1/2}$	−18	8344.209	4	*MB*	11981.067	$17300°_{3\,1/2}-29281_{2\,1/2}$	3
8043.096	20	*MB*	12429.605	$3703°_{3\,1/2}-16133_{2\,1/2}$	5	8355.149	70	*MB*	11965.379	$18704_{5\,1/2}-30669°_{4\,1/2}$	−9
8048.049	4	*MB*	12421.955	$7059°_{4\,1/2}-19481_{4\,1/2}$	−12	8358.004	10	*MB*	11961.292	$5513_{5\,1/2}-17475°_{4\,1/2}$	−21
8068.510	30	*MB*	12390.455	$19982_{4\,1/2}-32372°_{4\,1/2}$	21	8360.323	10	*MB*	11957.974		
8076.479	20	*MB*	12378.229	$1873°_{3\,1/2}-14252_{3\,1/2}$	−14	8381.054	10	*MB*	11928.395		
8078.472	7	*MB*	12375.175			8382.209	5	*MB*	11926.752	$11340°_{3\,1/2}-23267_{3\,1/2}$	0
8088.896	80	*MB*	12359.228	$17232_{7\,1/2}-29591°_{6\,1/2}$	7	8394.505	20	*MB*	11909.282	$2140°_{0\,1/2}-14049_{1\,1/2}$	13
8090.660	10	*CC*	12356.533			8402.256	10	*MB*	11898.296	$11742°_{5\,1/2}-23640_{4\,1/2}$	−21
8103.679	20	*MB*	12336.682			8404.121	50	*MB*	11895.655	$5675°_{4\,1/2}-17571_{4\,1/2}$	17
8118.362	10	*MB*	12314.370	$6389°_{4\,1/2}-18704_{5\,1/2}$	0	8405.253	50	*MB*	11894.053	$2382°_{4\,1/2}-14276_{5\,1/2}$	1
8121.454	6	*MB*	12309.681	$20554_{5\,1/2}-32864°_{5\,1/2}$	0	8410.949	10	*MB*	11885.998	$4266°_{3\,1/2}-16152_{3\,1/2}$	19
8127.865	4	*MB*	12299.972	$11340°_{3\,1/2}-23640_{4\,1/2}$	7	8418.233	70	*MB*	11875.714	$6517°_{2\,1/2}-18393_{3\,1/2}$	6
8129.640	70	*MB*	12297.286	$12365°_{4\,1/2}-24663_{4\,1/2}$	37	8426.612	10	*MB*	11863.905	$3995°_{3\,1/2}-15859_{4\,1/2}$	3
8137.067	8	*MB*	12286.062	$13659°_{4\,1/2}-25945_{3\,1/2}$	−4	8428.252	5	*MB*	11861.597	$19483_{2\,1/2}-31344°_{3\,1/2}$	−5
8145.997	10	*MB*	12272.594			8439.489	5	*MB*	11845.803	$13515°_{3\,1/2}-25361_{4\,1/2}$	−17
8148.328	6	*MB*	12269.083	$7713°_{4\,1/2}-19982_{4\,1/2}$	−14	8441.191	10	*MB*	11843.415	$6549°_{2\,1/2}-18393_{3\,1/2}$	−3
8152.624	20	*MB*	12262.618	$4737°_{2\,1/2}-17000_{3\,1/2}$	−15	8459.330	80	*MB*	11818.020	$20554_{5\,1/2}-32372°_{4\,1/2}$	−4
8159.131	4	*MB*	12252.838	$11387°_{3\,1/2}-23640_{4\,1/2}$	6	8464.210	15	*MB*	11811.206	$17232_{7\,1/2}-29043°_{6\,1/2}$	4
8159.583	5	*MB*	12252.160			8472.252	10	*MB*	11799.995	$3793°_{6\,1/2}-15593_{6\,1/2}$	−30
8163.453	5	*MB*	12246.351	$2581°_{4\,1/2}-14827_{3\,1/2}$	−14	8481.119	10	*MB*	11787.658	$12365°_{4\,1/2}-24153_{3\,1/2}$	−1
8164.709	7	*MB*	12244.467	$15134_{4\,1/2}-27378°_{5\,1/2}$	2	8483.685	20	*MB*	11784.093	$3745°_{1\,1/2}-15529_{2\,1/2}$	−7
8165.513	30	*MB*	12243.262	$2382°_{4\,1/2}-14625_{5\,1/2}$	5	8495.345	80	*MB*	11767.919	$7713°_{4\,1/2}-19481_{4\,1/2}$	−31
8175.588	30	*MB*	12228.174	$3593°_{4\,1/2}-15822_{3\,1/2}$	−2	8506.638	10	*MB*	11752.297	$5819°_{4\,1/2}-17571_{4\,1/2}$	9
8179.741	20	*MB*	12221.966	$7259°_{3\,1/2}-19481_{4\,1/2}$	1	8511.340	40	*CC*	11745.804	$2879°_{5\,1/2}-14625_{5\,1/2}$	−3
8199.206	20b	*MB*	12192.951	$2634°_{2\,1/2}-14827_{3\,1/2}$	−5	8511.687	30	*MB*	11745.325	$33148_{2\,1/2}-44893°_{3\,1/2}$	−24
8221.960	30	*MB*	12159.207			8535.134	10	*MB*	11713.059	$2563°_{5\,1/2}-14276_{5\,1/2}$	−5

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
8535.389	10	*MB*	11712.710	$16192°_{4\frac{1}{2}}-27905_{4\frac{1}{2}}$	19	9075.56	2	*CC*	11015.580	$0°_{3\frac{1}{2}}-11015_{3\frac{1}{2}}$	1
8539.104	70	*MB*	11707.614	$1410°_{4\frac{1}{2}}-13117_{4\frac{1}{2}}$	−3	9076.53	2	*V*	11014.403	$5118°_{2\frac{1}{2}}-16133_{2\frac{1}{2}}$	15
8548.260	8	*CC*	11695.074	$2581°_{4\frac{1}{2}}-14276_{5\frac{1}{2}}$	33	9118.23	7	*CC*	10964.031	$2563°_{5\frac{1}{2}}-13527_{4\frac{1}{2}}$	25
8550.126	6	*MB*	11692.522	$4459°_{3\frac{1}{2}}-16152_{3\frac{1}{2}}$	17	9133.26	6	*CC*	10945.989	$2581°_{4\frac{1}{2}}-13527_{4\frac{1}{2}}$	7
8552.545	20	*MB*	11689.215	$3745°_{1\frac{1}{2}}-15434_{2\frac{1}{2}}$	−8	9181.27	6	*CC*	10888.751	$3363°_{2\frac{1}{2}}-14252_{3\frac{1}{2}}$	0
8555.580	1	*CC*	11685.068			9183.86	1	*CC*	10885.680	$2641°_{3\frac{1}{2}}-13527_{4\frac{1}{2}}$	0
8556.679	10	*MB*	11683.567	$5616_{4\frac{1}{2}}-17300°_{3\frac{1}{2}}$	−3	9197.55	2	*CC*	10869.477	$5675°_{4\frac{1}{2}}-16545_{5\frac{1}{2}}$	−28
				$7454_{1\frac{1}{2}}-19138°_{1\frac{1}{2}}$	−15	9239.21	2	*CC*	10820.467	$0°_{3\frac{1}{2}}-10820_{2\frac{1}{2}}$	−18
8575.798	10	*MB*	11657.520	$5513_{5\frac{1}{2}}-17171°_{5\frac{1}{2}}$	−15	9258.84	25	*CC*	10797.526	$4165_{4\frac{1}{2}}-14963°_{5\frac{1}{2}}$	−23
8578.902	10	*MB*	11653.302	$1873°_{3\frac{1}{2}}-13527_{4\frac{1}{2}}$	−2	9312.18	6	*MB*	10735.678	$2382°_{4\frac{1}{2}}-13117_{4\frac{1}{2}}$	2
8584.840	10	*MB*	11645.242	$7059°_{4\frac{1}{2}}-18704_{5\frac{1}{2}}$	1	9315.48	3	*MB*	10731.875	$4844°_{1\frac{1}{2}}-15576_{1\frac{1}{2}}$	−48
8592.914	10	*MB*	11634.300	$4910°_{5\frac{1}{2}}-16545_{5\frac{1}{2}}$	−5	9320.46	6	*CC*	10726.141	$5819°_{4\frac{1}{2}}-16545_{5\frac{1}{2}}$	−14
8598.247	20	*MB*	11627.084	$8927°_{5\frac{1}{2}}-20554_{5\frac{1}{2}}$	2	9322.02	4	*MB*	10724.346	$4511°_{2\frac{1}{2}}-15235_{1\frac{1}{2}}$	24
8613.485	20	*MB*	11606.514	$5964°_{3\frac{1}{2}}-17571_{4\frac{1}{2}}$	9	9345.56	2	*CC*	10697.333	$4737°_{2\frac{1}{2}}-15434_{2\frac{1}{2}}$	7
8616.301	10	*MB*	11602.721	$7878°_{3\frac{1}{2}}-19481_{4\frac{1}{2}}$	9	9355.18	2	*CC*	10686.333	$3363°_{2\frac{1}{2}}-14049_{1\frac{1}{2}}$	0
8633.568	10	*MB*	11579.516	$8402°_{3\frac{1}{2}}-19982_{4\frac{1}{2}}$	−2	9357.63	6	*CC*	10683.535	$3703°_{3\frac{1}{2}}-14387_{4\frac{1}{2}}$	17
8667.556	10	*MB*	11534.109	$3995°_{3\frac{1}{2}}-15529_{2\frac{1}{2}}$	−6	9359.10	1	*MB*	10681.857	$16159°_{3\frac{1}{2}}-26841_{4\frac{1}{2}}$	9
8693.730	4	*CC*	11499.384	$4322°_{2\frac{1}{2}}-15822_{3\frac{1}{2}}$	33	9360.50	5	*CC*	10680.259	$7713°_{4\frac{1}{2}}-18393_{3\frac{1}{2}}$	22
8700.767	10	*MB*	11490.084	$14276_{5\frac{1}{2}}-25766°_{4\frac{1}{2}}$	27	9365.83	4	*MB*	10674.182	$4459°_{3\frac{1}{2}}-15134_{4\frac{1}{2}}$	4
				$3745°_{1\frac{1}{2}}-15235_{1\frac{1}{2}}$	−19	9367.20	3	*MB*	10672.620	$2595°_{1\frac{1}{2}}-13268_{2\frac{1}{2}}$	47
8702.380	70b	*CC*	11487.954	$3793°_{6\frac{1}{2}}-15281_{6\frac{1}{2}}$	−13	9373.10	1	*CC*	10665.902	$10274°_{3\frac{1}{2}}-20940_{3\frac{1}{2}}$	34
8716.660	50	*CC*	11469.134	$987°_{4\frac{1}{2}}-12456_{3\frac{1}{2}}$	0	9386.46	25	*CC*	10650.721		
8720.421	10	*MB*	11464.188	$3363°_{2\frac{1}{2}}-14827_{3\frac{1}{2}}$	−7	9389.28	2	*CC*	10647.522	$2879°_{5\frac{1}{2}}-13527_{4\frac{1}{2}}$	−21
8721.310	10	*MB*	11463.019	$2634°_{2\frac{1}{2}}-14097_{3\frac{1}{2}}$	−8	9398.74	5	*CC*	10636.806	$2581°_{4\frac{1}{2}}-13217_{3\frac{1}{2}}$	87
8724.528	10	*MB*	11458.791	$6517°_{2\frac{1}{2}}-17976_{2\frac{1}{2}}$	−2	9422.44	3	*CC*	10610.051	$6389°_{4\frac{1}{2}}-17000_{3\frac{1}{2}}$	−13
8746.160	2	*CC*	11430.450	$3703°_{3\frac{1}{2}}-15134_{4\frac{1}{2}}$	−5	9427.05	2	*CC*	10604.863	$17300°_{3\frac{1}{2}}-27905_{4\frac{1}{2}}$	16
8749.182	20	*MB*	11426.502	$6549°_{2\frac{1}{2}}-17976_{2\frac{1}{2}}$	−2	9431.30	1	*CC*	10600.084	$10114°_{2\frac{1}{2}}-20714_{2\frac{1}{2}}$	8
8757.980	2	*CC*	11415.023	$4737°_{2\frac{1}{2}}-16152_{3\frac{1}{2}}$	19	9446.21	2	*MB*	10583.353	$2634°_{2\frac{1}{2}}-13217_{3\frac{1}{2}}$	43
8769.900	6	*CC*	11399.508	$4459°_{3\frac{1}{2}}-15859_{4\frac{1}{2}}$	17	9446.70	4	*MB*	10582.804	$1873°_{3\frac{1}{2}}-12456_{3\frac{1}{2}}$	−8
8772.143	150	*MB*	11396.593	$2879°_{5\frac{1}{2}}-14276_{5\frac{1}{2}}$	−9	9452.99	8	*MB*	10575.762	$5616_{4\frac{1}{2}}-16192°_{4\frac{1}{2}}$	35
8777.180	6	*CC*	11390.053	$19950_{6\frac{1}{2}}-31340°_{6\frac{1}{2}}$	0	9466.01	2	*V*	10561.216	$4266°_{3\frac{1}{2}}-14827_{3\frac{1}{2}}$	−9
8777.443	4	*MB*	11389.712	$4203°_{6\frac{1}{2}}-15593_{6\frac{1}{2}}$	−13	9471.88	4	*CC*	10554.671	$2563°_{5\frac{1}{2}}-13117_{4\frac{1}{2}}$	−17
8797.210	1	*CC*	11364.120	$3363°_{2\frac{1}{2}}-14727_{1\frac{1}{2}}$	7	9483.89	2	*CC*	10541.305	$3508°_{0\frac{1}{2}}-14049_{1\frac{1}{2}}$	14
8798.040	2	*CC*	11363.047	$2140°_{0\frac{1}{2}}-13503_{0\frac{1}{2}}$	31	9488.10	3	*CC*	10536.627	$2581°_{4\frac{1}{2}}-13117_{4\frac{1}{2}}$	−37
8812.784	10	*MB*	11344.037	$1873°_{3\frac{1}{2}}-13217_{3\frac{1}{2}}$	−4	9504.29	2	*CC*	10518.679	$5010°_{2\frac{1}{2}}-15529_{2\frac{1}{2}}$	−26
8813.240	10	*MB*	11343.450	$4459°_{3\frac{1}{2}}-15803_{4\frac{1}{2}}$	12	9510.04	3	*MB*	10512.319	$7059°_{4\frac{1}{2}}-17571_{4\frac{1}{2}}$	−9
8891.200	30	*MB*	11243.988	$1873°_{3\frac{1}{2}}-13117_{4\frac{1}{2}}$	1	9517.72	2	*CC*	10503.837	$3593°_{4\frac{1}{2}}-14097_{3\frac{1}{2}}$	25
8899.300	3	*CC*	11233.754	$3593°_{4\frac{1}{2}}-14827_{3\frac{1}{2}}$	13	9527.12	2	*CC*	10493.473	$17851°_{0\frac{1}{2}}-28345_{0\frac{1}{2}}$	−42
8910.958	10	*MB*	11219.058	$3508°_{0\frac{1}{2}}-14727_{1\frac{1}{2}}$	−11	9530.58	1	*MB*	10489.663	$5964°_{3\frac{1}{2}}-16454_{2\frac{1}{2}}$	4
8941.360	2	*CC*	11180.911	$5819°_{4\frac{1}{2}}-17000_{3\frac{1}{2}}$	17	9536.53	2	*CC*	10483.119	$28349°_{3\frac{1}{2}}-38832_{2\frac{1}{2}}$	−7
8970.170	6	*CC*	11145.001	$2382°_{4\frac{1}{2}}-13527_{4\frac{1}{2}}$	8	9536.92	5	*MB*	10482.690	$3793°_{6\frac{1}{2}}-14276_{5\frac{1}{2}}$	26
8973.010	1	*CC*	11141.473	$5010°_{2\frac{1}{2}}-16152_{3\frac{1}{2}}$	−33	9542.41	3	*MB*	10476.659	$5675°_{4\frac{1}{2}}-16152_{3\frac{1}{2}}$	45
8993.410	1	*CC*	11116.201	$2140°_{0\frac{1}{2}}-13256_{1\frac{1}{2}}$	−7	9543.11	3	*CC*	10475.891	$17475°_{4\frac{1}{2}}-27950_{5\frac{1}{2}}$	23
8998.680	4	*CC*	11109.691	$987°_{4\frac{1}{2}}-12097_{3\frac{1}{2}}$	26	9545.38	3	*CC*	10473.399	$4266°_{3\frac{1}{2}}-14739_{2\frac{1}{2}}$	35
9022.700	3	*CC*	11080.115	$2595°_{1\frac{1}{2}}-13675_{2\frac{1}{2}}$	37	9553.10	2	*CC*	10464.936	$15803_{4\frac{1}{2}}-26268°_{3\frac{1}{2}}$	43
9024.687	10	*MB*	11077.676	$4203°_{6\frac{1}{2}}-15281_{6\frac{1}{2}}$	8	9559.67	1	*CC*	10457.743	$5118°_{2\frac{1}{2}}-15576_{1\frac{1}{2}}$	−18
9031.16	3	*CC*	11069.736	$4459°_{3\frac{1}{2}}-15529_{2\frac{1}{2}}$	32	9592.83	2	*MB*	10421.594	$4203°_{6\frac{1}{2}}-14625_{5\frac{1}{2}}$	25
9043.42	4	*CC*	11054.729	$8927°_{5\frac{1}{2}}-19982_{4\frac{1}{2}}$	56	9596.99	3	*MB*	10417.076	$4322°_{2\frac{1}{2}}-14739_{2\frac{1}{2}}$	23
9050.22	4	*CC*	11046.423	$1410°_{4\frac{1}{2}}-12456_{3\frac{1}{2}}$	−18	9600.73	1	*CC*	10413.018	$22576_{2\frac{1}{2}}-32989°_{3\frac{1}{2}}$	−29
9060.73	4	*CC*	11033.610	$5118°_{2\frac{1}{2}}-16152_{3\frac{1}{2}}$	39	9620.45	3	*MB*	10391.674	$3995°_{3\frac{1}{2}}-14387_{4\frac{1}{2}}$	22

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TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
9621.11	4	*MB*	10390.961	$4844°_{1\,1/2}-15235_{1\,1/2}$	26	10116.67	2	*MB*	9881.966	$987°_{4\,1/2}-10869_{4\,1/2}$	37
9628.75	1	*CC*	10382.716	$7092_{5\,1/2}-17475°_{4\,1/2}$	−41	10119.44	1	*MB*	9879.262	$5942°_{3\,1/2}-15822_{3\,1/2}$	1
9639.98	1	*CC*	10370.621	$4910°_{5\,1/2}-15281_{6\,1/2}$	−17	10123.25	3	*MB*	9875.543	$2581°_{4\,1/2}-12456_{3\,1/2}$	55
9648.30	1	*CC*	10361.678	$6638°_{4\,1/2}-17000_{3\,1/2}$	−70	10125.84	1	*MB*	9873.017	$39394_{3\,1/2}-49267°_{4\,1/2}$	29
9659.94	5	*CC*	10349.193	$1410°_{4\,1/2}-11759_{5\,1/2}$	30	10131.75	2	*MB*	9867.258		
9670.56	4	*MB*	10337.827	$7233°_{5\,1/2}-17571_{4\,1/2}$	54	10142.15	1	*CC*	9857.140	$5964°_{3\,1/2}-15822_{3\,1/2}$	−22
9691.12	5	*CC*	10315.895	$5118°_{2\,1/2}-15434_{2\,1/2}$	3	10168.80	1	*CC*	9831.307	$4266°_{3\,1/2}-14097_{3\,1/2}$	10
9694.52	6	*CC*	10312.278	$3363°_{2\,1/2}-13675_{2\,1/2}$	−16	10169.87	3	*MB*	9830.273	$7341_{5\,1/2}-17171°_{5\,1/2}$	35
9702.04	9	*CC*	10304.285	$3745°_{1\,1/2}-14049_{1\,1/2}$	0	10174.54	5	*MB*	9825.761	$5455°_{7\,1/2}-15281_{6\,1/2}$	4
9712.15	1	*MB*	10293.558	$5283°_{0\,1/2}-15576_{1\,1/2}$	19	10185.49	5	*MB*	9815.198	$2641°_{3\,1/2}-12456_{3\,1/2}$	11
9722.38	7	*CC*	10282.727	$9198°_{3\,1/2}-19481_{4\,1/2}$	13	10192.25	1	*MB*	9808.688		
9747.02	2	*CC*	10256.733	$3995°_{3\,1/2}-14252_{3\,1/2}$	15	10209.23	1	*MB*	9792.374	$25766°_{4\,1/2}-35558_{3\,1/2}$	27
9774.63	3	*MB*	10227.761	$5283°_{0\,1/2}-15510_{0\,1/2}$	5	10245.56	1	*MB*	9757.651	$9723°_{4\,1/2}-19481_{4\,1/2}$	−53
9779.10	6	*MB*	10223.086	$4910°_{5\,1/2}-15134_{4\,1/2}$	0	10250.08	3	*MB*	9753.348	$4523°_{4\,1/2}-14276_{5\,1/2}$	83
9792.04	2	*CC*	10209.577	$5942°_{3\,1/2}-16152_{3\,1/2}$	−1	10255.48	1	*MB*	9748.213	$3508°_{0\,1/2}-13256_{1\,1/2}$	−17
9809.75	4	*MB*	10191.145			10271.22	4	*MB*	9733.274	$3703°_{3\,1/2}-13436_{2\,1/2}$	14
9831.85	1	*CC*	10168.237	$5964°_{3\,1/2}-16133_{2\,1/2}$	−60	10279.19	1	*MB*	9725.727	$0°_{3\,1/2}-9725_{3\,1/2}$	−5
9841.56	4	*MB*	10158.205	$7818°_{1\,1/2}-17976_{2\,1/2}$	−60	10290.43	1	*MB*	9715.104	$2382°_{4\,1/2}-12097_{3\,1/2}$	74
9847.56	3	*MB*	10152.016	$5651°_{5\,1/2}-15803_{4\,1/2}$	63	10290.99	1	*MB*	9714.576	$4910°_{5\,1/2}-14625_{5\,1/2}$	36
9865.06	10	*MB*	10134.007	$7341_{5\,1/2}-17475°_{4\,1/2}$	−8	10297.10	3	*CC*	9708.811	$5118°_{2\,1/2}-14827_{3\,1/2}$	−5
9874.10	2	*MB*	10124.729	$13515°_{3\,1/2}-23640_{4\,1/2}$	19	10298.86	1	*CC*	9707.152	$11007°_{1\,1/2}-20714_{2\,1/2}$	−7
9889.45	2	*MB*	10109.014	$2595°_{1\,1/2}-12704_{1\,1/2}$	24	10308.75	2	*MB*	9697.839		
9900.68	2	*MB*	10097.548			10315.69	1	*CC*	9691.315	$3745°_{1\,1/2}-13436_{2\,1/2}$	−63
9910.90	1	*CC*	10087.135	$5716°_{3\,1/2}-15803_{4\,1/2}$	41	10323.51	2	*MB*	9683.974		
9924.33	4	*MB*	10073.485	$10641°_{2\,1/2}-20714_{2\,1/2}$	−31	10336.16	1	*CC*	9672.122		
9925.43	8	*MB*	10072.369	$4203°_{6\,1/2}-14276_{5\,1/2}$	5	10338.85	1	*CC*	9669.606		
9927.80	1	*MB*	10069.964	$2634°_{2\,1/2}-12704_{1\,1/2}$	−3	10339.93	1	*MB*	9668.596		
9937.49	1	*MB*	10060.145			10357.32	1	*V*	9652.362	$5924°_{1\,1/2}-15576_{1\,1/2}$	−1
9949.45	1	*MB*	10048.052	$1410°_{4\,1/2}-11458_{5\,1/2}$	3	10376.24	1	*CC*	9634.762	$6517°_{2\,1/2}-16152_{3\,1/2}$	4
9969.35	2	*MB*	10027.995	$987°_{4\,1/2}-11015_{3\,1/2}$	27	10381.66	2	*CC*	9629.730	$10924°_{4\,1/2}-20554_{5\,1/2}$	10
9979.91	5	*MB*	10017.384			10387.16	12	*CC*	9624.633	$5969°_{5\,1/2}-15593_{6\,1/2}$	−19
9994.29	4	*MB*	10002.971	$5819°_{4\,1/2}-15822_{3\,1/2}$	25	10396.87	1	*V*	9615.644	$6517°_{2\,1/2}-16133_{2\,1/2}$	69
10002.24	4	*MB*	9995.020	$3508°_{0\,1/2}-13503_{0\,1/2}$	−17	10404.32	1	*V*	9608.759	$5118°_{2\,1/2}-14727_{1\,1/2}$	25
10011.46	1	*V*	9985.815	$4266°_{3\,1/2}-14252_{3\,1/2}$	35	10407.97	3	*CC*	9605.389	$5924°_{1\,1/2}-15529_{2\,1/2}$	17
10011.63	1	*MB*	9985.646			10452.20	1	*CC*	9564.741	$5964°_{2\,1/2}-15529_{2\,1/2}$	61
10023.86	1	*MB*	9973.462			10496.83	3	*CC*	9524.076	$3593°_{4\,1/2}-13117_{4\,1/2}$	36
10043.84	1	*MB*	9953.623			10498.30	2	*CC*	9522.740	$3745°_{1\,1/2}-13268_{2\,1/2}$	−3
10044.88	3	*MB*	9952.592	$5283°_{0\,1/2}-15235_{1\,1/2}$	42	10505.63	1	*CC*	9516.095	$2581°_{4\,1/2}-12097_{3\,1/2}$	76
10055.24	3	*MB*	9942.338	$5651°_{5\,1/2}-15593_{6\,1/2}$	35	10511.02	3	*CC*	9511.215	$3745°_{1\,1/2}-13256_{1\,1/2}$	−11
10056.67	4	*MB*	9940.924	$7059°_{4\,1/2}-17000_{3\,1/2}$	−10	10532.40	2	*CC*	9491.908	$5942°_{2\,1/2}-15434_{2\,1/2}$	7
10058.87	10	*MB*	9938.750	$7293°_{6\,1/2}-17232_{7\,1/2}$	36	10556.98	2	*CC*	9469.808	$5964°_{3\,1/2}-15434_{2\,1/2}$	5
10064.31	2	*MB*	9933.378	$3593°_{4\,1/2}-13527_{4\,1/2}$	21	10557.41	1	*CC*	9469.425	$6389°_{4\,1/2}-15859_{4\,1/2}$	5
10070.52	2	*CC*	9927.252	$32802_{5\,1/2}-42729°_{5\,1/2}$	−29	10569.82	3	*CC*	9458.307	$5675°_{4\,1/2}-15134_{4\,1/2}$	21
				$4459°_{3\,1/2}-14387_{4\,1/2}$	12	10615.27	3	*CC*	9417.811	$5716°_{3\,1/2}-15134_{4\,1/2}$	−22
10091.04	4	*MB*	9907.065	$6638°_{4\,1/2}-16545_{5\,1/2}$	55	10619.17	4	*CC*	9414.352	$3703°_{3\,1/2}-13117_{4\,1/2}$	24
10098.15	1	*MB*	9900.090	$8804°_{4\,1/2}-18704_{5\,1/2}$	1	10620.24	1	*CC*	9413.401	$6389°_{4\,1/2}-15803_{4\,1/2}$	33
10100.55	1	*MB*	9897.738			10646.46	3	*CC*	9390.217	$5437°_{3\,1/2}-14827_{3\,1/2}$	16
10103.18	1	*V*	9895.161	$4844°_{1\,1/2}-14739_{2\,1/2}$	44	10674.73	2	*CC*	9365.353	$4910°_{5\,1/2}-14276_{5\,1/2}$	18
10105.10	6	*MB*	9893.281	$3363°_{2\,1/2}-13256_{1\,1/2}$	7	10680.48	2	*CC*	9360.307	$4737°_{2\,1/2}-14097_{3\,1/2}$	−9
10116.02	2	*MB*	9882.601			10688.84	1	*CC*	9352.990	$4322°_{2\,1/2}-13675_{2\,1/2}$	−23

TABLE 4. *Spectral lines of* Ce II — Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O−C 0.001 cm^{-1}
10696.42	15	*CC*	9346.362	$5616_{4\,1/2} - 14963°_{5\,1/2}$	1	11491.75	2	*V*	8699.513	$4737°_{2\,1/2} - 13436_{2\,1/2}$	28
10732.53	2	*V*	9314.916	$5819°_{4\,1/2} - 15134_{4\,1/2}$	−18	11543.85	1	*V*	8660.250	$5437°_{3\,1/2} - 14097_{3\,1/2}$	−16
10735.26	1	*CC*	9312.547	$5969°_{5\,1/2} - 15281_{6\,1/2}$	−47	11546.73	1	*V*	8658.090	$4459°_{3\,1/2} - 13117_{4\,1/2}$	40
10736.30	2	*CC*	9311.640	$7233°_{5\,1/2} - 16545_{5\,1/2}$	−2	11590.01	5	*V*	8625.759	$7233°_{5\,1/2} - 15859_{4\,1/2}$	23
10748.50	1	*CC*	9301.072	$14481°_{2\,1/2} - 23782_{2\,1/2}$	14	11591.08	2	*V*	8624.963	$5651°_{5\,1/2} - 14276_{5\,1/2}$	22
10757.84	2	*V*	9293.000	$1410°_{4\,1/2} - 10703_{4\,1/2}$	0	11602.76	2	*V*	8616.280	$4910°_{5\,1/2} - 13527_{4\,1/2}$	4
10760.66	1	*CC*	9290.561	$26268°_{3\,1/2} - 35558_{3\,1/2}$	61	11624.32	4	*V*	8600.299	$7259°_{3\,1/2} - 15859_{4\,1/2}$	11
10782.03	2	*CC*	9272.151	$6549°_{2\,1/2} - 15822_{3\,1/2}$	0	11628.39	1	*V*	8597.289	$8402°_{3\,1/2} - 17000_{3\,1/2}$	−49
10783.05	1	*CC*	9271.270	$18704_{5\,1/2} - 27975°_{4\,1/2}$	−36	11631.62	3	*V*	8594.902	$4523°_{4\,1/2} - 13117_{4\,1/2}$	13
10795.20	2	*CC*	9260.839	$4266°_{3\,1/2} - 13527_{4\,1/2}$	−2	11635.32	1	*V*	8592.169	$4844°_{1\,1/2} - 13436_{2\,1/2}$	−44
10803.38	2	*CC*	9253.824	$7746°_{2\,1/2} - 17000_{3\,1/2}$	2	11643.35	4	*V*	8586.243	$4165_{4\,1/2} - 12751°_{5\,1/2}$	11
10806.26	1	*CC*	9251.356	$7293°_{6\,1/2} - 16545_{5\,1/2}$	25	11653.63	1	*V*	8578.669	$2879°_{5\,1/2} - 11458_{5\,1/2}$	11
10826.44	2	*CC*	9234.117	$3793°_{6\,1/2} - 13027_{6\,1/2}$	−6	11658.60	5	*V*	8575.012	$2879°_{5\,1/2} - 11454_{6\,1/2}$	6
10870.21	2	*CC*	9196.931	$8278_{5\,1/2} - 17475°_{4\,1/2}$	−38					$12365°_{4\,1/2} - 20940_{3\,1/2}$	−20
10876.90	2	*CC*	9191.278	$5942°_{3\,1/2} - 15134_{4\,1/2}$	26	11665.84	1	*V*	8569.690	$7233°_{5\,1/2} - 15803_{4\,1/2}$	7
10889.46	1	*V*	9180.677	$7011_{4\,1/2} - 16192°_{4\,1/2}$	15	11668.10	4	*V*	8568.030	$5819°_{4\,1/2} - 14387_{4\,1/2}$	31
10903.62	2	*CC*	9168.750	$8402°_{3\,1/2} - 17571_{4\,1/2}$	17	11711.86	3	*V*	8536.017	$5716°_{3\,1/2} - 14252_{3\,1/2}$	55
10908.00	1	*CC*	9165.073	$6638°_{4\,1/2} - 15803_{4\,1/2}$	21	11734.79	3	*V*	8519.337	$4737°_{2\,1/2} - 13256_{1\,1/2}$	9
10908.72	6	*CC*	9164.468	$4511°_{2\,1/2} - 13675_{2\,1/2}$	3	11741.13	1	*V*	8514.737	$7061°_{0\,1/2} - 15576_{1\,1/2}$	7
10958.88	1	*CC*	9122.517	$3995°_{3\,1/2} - 13117_{4\,1/2}$	55	11746.37	3	*V*	8510.939	$8789_{2\,1/2} - 17300°_{3\,1/2}$	9
10972.26	2	*CC*	9111.392	$5716°_{3\,1/2} - 14827_{3\,1/2}$	−15	11757.66	2	*V*	8502.766	$4201°_{1\,1/2} - 12704_{1\,1/2}$	25
10994.04	2	*CC*	9093.347	$9053_{3\,1/2} - 18147°_{2\,1/2}$	−28	11767.26	4	*V*	8495.829	$6638°_{4\,1/2} - 15134_{4\,1/2}$	40
				$3363°_{2\,1/2} - 12456_{3\,1/2}$	28	11815.34	4	*V*	8461.258	$3995°_{3\,1/2} - 12456_{3\,1/2}$	−27
11001.92	2	*V*	9086.834	$5010°_{2\,1/2} - 14097_{3\,1/2}$	15	11820.98	5	*V*	8457.221	$5819°_{4\,1/2} - 14276_{5\,1/2}$	36
11014.91	2	*V*	9076.118	$2382°_{4\,1/2} - 11458_{5\,1/2}$	11	11833.00	6	*V*	8448.630	$0°_{3\,1/2} - 8448_{2\,1/2}$	−10
11040.33	1	*V*	9055.220	$6521°_{1\,1/2} - 15576_{1\,1/2}$	−15	11839.08	1	*V*	8444.291	$5942°_{3\,1/2} - 14387_{4\,1/2}$	−22
11040.82	1	*V*	9054.818	$4201°_{1\,1/2} - 13256_{1\,1/2}$	10	11844.80	1	*V*	8440.213	$1873°_{3\,1/2} - 10314_{4\,1/2}$	−14
11042.27	2	*V*	9053.629	$0°_{3\,1/2} - 9053_{3\,1/2}$	0	11848.36	1	*V*	8437.677	$6389°_{4\,1/2} - 14827_{3\,1/2}$	−3
11080.15	3	*V*	9022.677	$7522°_{5\,1/2} - 16545_{5\,1/2}$	31	11864.75	2	*V*	8426.021	$5010°_{2\,1/2} - 13436_{2\,1/2}$	33
11102.95	1	*V*	9004.149	$4523°_{4\,1/2} - 13527_{4\,1/2}$	−56	11868.26	1	*V*	8423.529	$4844°_{1\,1/2} - 13268_{2\,1/2}$	−44
11105.85	3	*V*	9001.798	$4266°_{3\,1/2} - 13268_{2\,1/2}$	−22	11870.49	3	*V*	8421.947	$5675°_{4\,1/2} - 14097_{3\,1/2}$	21
11131.59	3	*V*	8980.983	$9723°_{4\,1/2} - 18704_{5\,1/2}$	5	11871.25	2	*V*	8421.408	$9053_{3\,1/2} - 17475°_{4\,1/2}$	14
11168.12	5	*V*	8951.607	$4266°_{3\,1/2} - 13217_{3\,1/2}$	28	11876.04	1	*V*	8418.011	$12365°_{4\,1/2} - 20783_{5\,1/2}$	27
11170.45	2	*V*	8949.740	$5675°_{4\,1/2} - 14625_{5\,1/2}$	0	11910.41	3	*V*	8393.719	$3703°_{3\,1/2} - 12097_{3\,1/2}$	37
11174.42	2	*V*	8946.560	$1873°_{3\,1/2} - 10820_{2\,1/2}$	8	11927.13	4	*V*	8381.953	$4322°_{2\,1/2} - 12704_{1\,1/2}$	27
11184.68	1	*V*	8938.353	$4737°_{2\,1/2} - 13675_{2\,1/2}$	5	11927.73	5	*V*	8381.531	$5716°_{3\,1/2} - 14097_{3\,1/2}$	58
11241.53	1	*V*	8893.151	$8278_{5\,1/2} - 17171°_{5\,1/2}$	−39	11938.39	1	*V*	8374.047	$7202°_{2\,1/2} - 15576_{1\,1/2}$	8
11252.11	2	*V*	8884.789	$6549°_{2\,1/2} - 15434_{2\,1/2}$	−1					$2641°_{3\,1/2} - 11015_{3\,1/2}$	27
11253.44	1	*V*	8883.739	$12057°_{2\,1/2} - 20940_{3\,1/2}$	7	11946.67	4	*V*	8368.243	$6913°_{6\,1/2} - 15281_{6\,1/2}$	33
11258.48	3	*V*	8879.762	$2879°_{5\,1/2} - 11759_{5\,1/2}$	−9	12014.34	3	*V*	8321.110	$2382°_{4\,1/2} - 10703_{4\,1/2}$	51
11294.27	2	*V*	8851.623	$8448_{2\,1/2} - 17300°_{3\,1/2}$	−45	12022.52	1	*V*	8315.448	$1410°_{4\,1/2} - 9725_{3\,1/2}$	19
11329.76	2	*V*	8823.896	$4203°_{6\,1/2} - 13027_{6\,1/2}$	72	12030.37	2	*V*	8310.022	$6517°_{2\,1/2} - 14827_{3\,1/2}$	18
11356.22	2	*V*	8803.336	$5924°_{1\,1/2} - 14727_{1\,1/2}$	1	12031.29	3	*V*	8309.387	$5942°_{3\,1/2} - 14252_{3\,1/2}$	7
11360.15	1	*V*	8800.291	$7059°_{4\,1/2} - 15859_{4\,1/2}$	0	12045.20	1	*V*	8299.791	$7293°_{6\,1/2} - 15593_{6\,1/2}$	69
11393.09	2	*V*	8774.847	$5964°_{3\,1/2} - 14739_{2\,1/2}$	−17	12048.22	3	*V*	8297.710	$7278°_{1\,1/2} - 15576_{1\,1/2}$	64
11401.21	1	*V*	8768.598	$8531_{3\,1/2} - 17300°_{3\,1/2}$	−33	12061.86	2	*V*	8288.327	$2581°_{4\,1/2} - 10869_{4\,1/2}$	43
11403.00	1	*V*	8767.221	$8804°_{4\,1/2} - 17571_{4\,1/2}$	45	12075.97	2	*V*	8278.643	$5819°_{4\,1/2} - 14097_{3\,1/2}$	67
11414.86	3	*V*	8758.112	$4459°_{3\,1/2} - 13217_{3\,1/2}$	9					$8175°_{2\,1/2} - 16454_{2\,1/2}$	−48
11431.48	1	*V*	8745.379	$4511°_{2\,1/2} - 13256_{1\,1/2}$	−64	12097.54	5	*V*	8263.882	$2382°_{4\,1/2} - 10646_{5\,1/2}$	58
11480.00	1	*V*	8708.417	$7746°_{2\,1/2} - 16454_{2\,1/2}$	47	12107.14	2	*V*	8257.329	$5010°_{2\,1/2} - 13268_{2\,1/2}$	−18

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
12116.87	4	V	8250.698	$7278°_{1\,1/2}-15529_{2\,1/2}$	45	12798.83	6	V	7811.077	$5716°_{3\,1/2}-13527_{4\,1/2}$	54
12135.11	2	V	8238.297	$5437°_{3\,1/2}-13675_{2\,1/2}$	−2	12812.28	1	V	7802.878	$12751°_{5\,1/2}-20554_{5\,1/2}$	64
12139.08	2	V	8235.603	$6389°_{4\,1/2}-14625_{5\,1/2}$	42	12844.01	3	V	7783.601	$4165_{4\,1/2}-11949°_{3\,1/2}$	−37
12144.51	1	V	8231.921	$7278°_{1\,1/2}-15510_{0\,1/2}$	57	12844.28	3	V	7783.438	$7746°_{2\,1/2}-15529_{2\,1/2}$	47
12149.94	1	V	8228.242	$12326°_{6\,1/2}-20554_{5\,1/2}$	63	12849.08	2	V	7780.530	$5437°_{3\,1/2}-13217_{3\,1/2}$	−23
12161.38	1	V	8220.501	$5283°_{0\,1/2}-13503_{0\,1/2}$	22	12850.83	3	V	7779.470	$10924°_{4\,1/2}-18704_{5\,1/2}$	34
12179.75	5	V	8208.103	$11742°_{5\,1/2}-19950_{6\,1/2}$	8	12858.90	1	V	7774.588	$4322°_{2\,1/2}-12097_{3\,1/2}$	20
12191.34	3	V	8200.300	$4165_{4\,1/2}-12365°_{4\,1/2}$	44	12884.75	6	V	7758.990	$7522°_{5\,1/2}-15281_{6\,1/2}$	11
12198.09	1	V	8195.762	$8804°_{4\,1/2}-17000_{3\,1/2}$	−20	12900.16	3	V	7749.722	$8402°_{3\,1/2}-16152_{3\,1/2}$	13
12201.64	3	V	8193.377	$4511°_{2\,1/2}-12704_{1\,1/2}$	1	12901.63	2	V	7748.839	$6638°_{4\,1/2}-14387_{4\,1/2}$	−14
12213.01	3	V	8185.750	$2634°_{2\,1/2}-10820_{2\,1/2}$	−69	12914.70	1	V	7740.997	$8804°_{4\,1/2}-16545_{5\,1/2}$	−47
12223.22	2	V	8178.912	$2641°_{3\,1/2}-10820_{2\,1/2}$	−14	12925.45	2	V	7734.559	$6517°_{2\,1/2}-14252_{3\,1/2}$	0
12224.37	2	V	8178.143	$12762°_{4\,1/2}-20940_{3\,1/2}$	−54	12928.12	1	V	7732.961	$5942°_{3\,1/2}-13675_{2\,1/2}$	38
12226.39	6	V	8176.792	$7341_{5\,1/2}-15517°_{6\,1/2}$	27					$2581°_{4\,1/2}-10314_{4\,1/2}$	57
12228.16	2	V	8175.608	$7259°_{3\,1/2}-15434_{2\,1/2}$	−15	12932.24	1	V	7730.498	$8402°_{3\,1/2}-16133_{2\,1/2}$	−27
12230.95	3	V	8173.743	$7061°_{0\,1/2}-15235_{1\,1/2}$	2	12946.05	2	V	7722.251	$0°_{3\,1/2}-7722_{2\,1/2}$	−33
12243.19	2	V	8165.571	$3593°_{4\,1/2}-11759_{5\,1/2}$	−13	12950.90	6	V	7719.360	$4737°_{2\,1/2}-12456_{3\,1/2}$	−12
12267.52	1	V	8149.377	$5118°_{2\,1/2}-13268_{2\,1/2}$	−34	12963.06	2	V	7712.118	$6913°_{6\,1/2}-14625_{5\,1/2}$	8
12273.13	1	V	8145.652	$5513_{5\,1/2}-13659°_{4\,1/2}$	32	12964.30	2	V	7711.381	$7818°_{1\,1/2}-15529_{2\,1/2}$	−47
12281.52	1	V	8140.087	$2563°_{5\,1/2}-10703_{4\,1/2}$	15	12969.82	2	V	7708.099	$5819°_{4\,1/2}-13527_{4\,1/2}$	−26
12284.81	1	V	8137.907	$5118°_{2\,1/2}-13256_{1\,1/2}$	12	12970.46	4	V	7707.718	$6389°_{4\,1/2}-14097_{3\,1/2}$	−28
12290.64	6	V	8134.047	$4322°_{2\,1/2}-12456_{3\,1/2}$	9	12981.05	3	V	7701.430	$10274°_{3\,1/2}-17976_{2\,1/2}$	−11
12294.93	6	V	8131.209	$0°_{3\,1/2}-8131_{4\,1/2}$	−7	12995.93	2	V	7692.613	$7818°_{1\,1/2}-15510_{0\,1/2}$	−25
12297.39	2	V	8129.582	$12751°_{5\,1/2}-20881_{6\,1/2}$	37	13016.48	5	V	7680.468	$5437°_{3\,1/2}-13117_{4\,1/2}$	−31
12308.79	2	V	8122.053	$2581°_{4\,1/2}-10703_{4\,1/2}$	5	13041.57	3	V	7665.692	$7061°_{0\,1/2}-14727_{1\,1/2}$	−9
12316.77	2	V	8116.791	$4910°_{5\,1/2}-13027_{6\,1/2}$	−3	13043.29	3	V	7664.681	$3793°_{6\,1/2}-11458_{5\,1/2}$	−37
12357.76	6	V	8089.868	$5437°_{3\,1/2}-13527_{4\,1/2}$	51	13049.51	3	V	7661.028	$3793°_{6\,1/2}-11454_{6\,1/2}$	−38
12368.46	2	V	8082.869	$2563°_{5\,1/2}-10646_{5\,1/2}$	32	13079.71	3	V	7643.339	$1410°_{4\,1/2}-9053_{3\,1/2}$	14
12379.10	4	V	8075.922	$7746°_{2\,1/2}-15822_{3\,1/2}$	48	13088.87	6	V	7637.990	$6638°_{4\,1/2}-14276_{5\,1/2}$	−49
12380.64	1	V	8074.917	$7059°_{4\,1/2}-15134_{4\,1/2}$	−58	13116.23	3	V	7622.057	$7341_{5\,1/2}-14963°_{5\,1/2}$	−35
12386.59	3	V	8071.039	$7522°_{5\,1/2}-15593_{6\,1/2}$	1	13123.66	1	V	7617.742	$8927°_{5\,1/2}-16545_{5\,1/2}$	−12
12394.28	2	V	8066.031	$987°_{4\,1/2}-9053_{3\,1/2}$	13	13125.83	1	V	7616.483	$7818°_{1\,1/2}-15434_{2\,1/2}$	−68
12412.58	2	V	8054.139	$7522°_{0\,1/2}-15576_{1\,1/2}$	29	13181.32	3	V	7584.419	$5942°_{3\,1/2}-13527_{4\,1/2}$	−21
12422.03	5	V	8048.012	$7233°_{5\,1/2}-15281_{6\,1/2}$	37	13194.82	3	V	7576.659	$4165_{4\,1/2}-11742°_{5\,1/2}$	−35
12501.43	1	V	7996.897	$4459°_{3\,1/2}-12456_{3\,1/2}$	23	13212.73	4	V	7566.389	$7059°_{4\,1/2}-14625_{5\,1/2}$	−41
12533.27	3	V	7976.581	$8175°_{2\,1/2}-16152_{3\,1/2}$	67	13219.82	2	V	7562.331	$5964°_{3\,1/2}-13527_{4\,1/2}$	−11
12547.98	1	V	7967.230	$4737°_{2\,1/2}-12704_{1\,1/2}$	−30	13238.01	1	V	7551.940	$5716°_{3\,1/2}-13268_{2\,1/2}$	−61
12550.20	1	V	7965.821	$3793°_{6\,1/2}-11759_{5\,1/2}$	−11	13255.21	4	V	7542.141	$5675°_{4\,1/2}-13217_{3\,1/2}$	−71
12573.18	1	V	7951.262	$7011_{4\,1/2}-14963°_{5\,1/2}$	−33	13257.13	2	V	7541.048	$8280°_{2\,1/2}-15822_{3\,1/2}$	−64
12582.22	4	V	7945.549	$4511°_{2\,1/2}-12456_{3\,1/2}$	60	13266.63	1	V	7535.648	$10035°_{5\,1/2}-17571_{4\,1/2}$	−41
12603.79	2	V	7931.951	$2382°_{4\,1/2}-10314_{4\,1/2}$	35	13269.52	2	V	7534.007	$11949°_{3\,1/2}-19483_{2\,1/2}$	−28
12608.85	1	V	7928.768	$13012°_{2\,1/2}-20940_{3\,1/2}$	24	13272.86	3	V	7532.111	$6517°_{2\,1/2}-14049_{1\,1/2}$	−30
12640.14	5	V	7909.141	$987°_{4\,1/2}-8896_{5\,1/2}$	23	13279.47	2	V	7528.362	$6521°_{1\,1/2}-14049_{1\,1/2}$	−66
12644.15	3	V	7906.633	$1410°_{4\,1/2}-9316_{3\,1/2}$	25	13300.80	6	V	7516.289	$3793°_{6\,1/2}-11309_{7\,1/2}$	−48
12654.05	2	V	7900.447	$7233°_{5\,1/2}-15134_{4\,1/2}$	26	13338.67	4	V	7494.950	$2563°_{5\,1/2}-10058_{6\,1/2}$	−42
12676.64	4	V	7886.368	$6389°_{4\,1/2}-14276_{5\,1/2}$	12	13353.94	6	V	7486.379	$1410°_{4\,1/2}-8896_{5\,1/2}$	−45
12715.61	1	V	7862.199	$6389°_{4\,1/2}-14252_{3\,1/2}$	−36	13402.31	2	V	7459.360	$6638°_{4\,1/2}-14097_{3\,1/2}$	−70
12719.18	2	V	7859.992	$4844°_{1\,1/2}-12704_{1\,1/2}$	2	13406.52	1	V	7457.018	$3363°_{2\,1/2}-10820_{2\,1/2}$	−40
12732.47	4	V	7851.788	$1873°_{3\,1/2}-9725_{3\,1/2}$	−10	13431.91	2	V	7442.922	$1873°_{3\,1/2}-9316_{3\,1/2}$	−55
12766.60	5	V	7830.797	$5437°_{3\,1/2}-13268_{2\,1/2}$	1	13447.22	6	V	7434.448	$2879°_{5\,1/2}-10314_{4\,1/2}$	−18

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
13470.54	3	V	7421.578	$5283°_{0\,1/2}-12704_{1\,1/2}$	−26	14812.85	3	V	6749.051	$5616_{4\,1/2}-12365°_{4\,1/2}$	−15
13474.49	3	V	7419.402	$8402°_{3\,1/2}-15822_{3\,1/2}$	11	14831.64	2	V	6740.500	$5716°_{3\,1/2}-12456_{3\,1/2}$	−29
13506.77	4	V	7401.670	$5716°_{3\,1/2}-13117_{4\,1/2}$	−35	14843.05	1	V	6735.319	$6521°_{1\,1/2}-13256_{1\,1/2}$	−49
13508.61	2	V	7400.662	$8175°_{2\,1/2}-15576_{1\,1/2}$	−42	14865.87	1	V	6724.980	$10274°_{3\,1/2}-17000_{3\,1/2}$	−55
				$8402°_{3\,1/2}-15803_{4\,1/2}$	20	14874.98	5	V	6720.861	$1410°_{4\,1/2}-8131_{4\,1/2}$	−51
13524.73	1	V	7391.842	$7233°_{5\,1/2}-14625_{5\,1/2}$	−33	14960.93	1	V	6682.250	$2634°_{2\,1/2}-9316_{3\,1/2}$	4
13553.08	1	V	7376.379	$5651°_{5\,1/2}-13027_{6\,1/2}$	−21	14979.45	1	V	6673.988	$7713°_{4\,1/2}-14387_{4\,1/2}$	−34
13583.48	1	V	7359.871	$4737°_{2\,1/2}-12097_{3\,1/2}$	−31	15039.21	2	V	6647.469	$7011_{4\,1/2}-13659°_{4\,1/2}$	−55
				$8169°_{1\,1/2}-15529_{2\,1/2}$	−6	15205.69	3	V	6574.689	$1873°_{3\,1/2}-8448_{2\,1/2}$	−17
13594.93	2	V	7353.672	$8175°_{2\,1/2}-15529_{2\,1/2}$	−40	15230.66	1	V	6563.910	$8175°_{2\,1/2}-14739_{2\,1/2}$	12
13624.15	3	V	7337.901	$5118°_{2\,1/2}-12456_{3\,1/2}$	−38	15253.46	2	V	6554.098	$4266°_{3\,1/2}-10820_{2\,1/2}$	10
13672.47	2	V	7311.968	$3703°_{3\,1/2}-11015_{3\,1/2}$	−16	15277.65	5	V	6543.721	$4910°_{5\,1/2}-11454_{6\,1/2}$	−16
13697.01	2	V	7298.868	$5819°_{4\,1/2}-13117_{4\,1/2}$	59	15346.27	3	V	6514.461	$2382°_{4\,1/2}-8896_{5\,1/2}$	−21
13712.83	4	V	7290.447	$987°_{4\,1/2}-8278_{5\,1/2}$	4	15357.94	3	V	6509.511	$10035°_{5\,1/2}-16545_{5\,1/2}$	−46
13781.01	4	V	7254.379	$4203°_{6\,1/2}-11458_{5\,1/2}$	−39	15385.72	2	V	6497.758	$4322°_{2\,1/2}-10820_{2\,1/2}$	−19
13808.91	2	V	7239.722	$8278_{5\,1/2}-15517°_{6\,1/2}$	4	15435.22	2	V	6476.920	$14404°_{7\,1/2}-20881_{6\,1/2}$	−6
13812.10	2	V	7238.050	$5513_{5\,1/2}-12751°_{5\,1/2}$	−22	15444.26	3	V	6473.129	$7202°_{2\,1/2}-13675_{2\,1/2}$	−63
13852.00	2	V	7217.201	$7059°_{4\,1/2}-14276_{5\,1/2}$	−24	15460.59	1	V	6466.291	$13515°_{3\,1/2}-19982_{4\,1/2}$	−42
13924.35	2	V	7179.701	$1873°_{3\,1/2}-9053_{3\,1/2}$	6	15477.01	2	V	6459.431	$11015_{3\,1/2}-17475°_{4\,1/2}$	−12
13926.58	3	V	7178.551	$2879°_{5\,1/2}-10058_{6\,1/2}$	20	15507.86	1	V	6446.581	$8280°_{2\,1/2}-14727_{1\,1/2}$	−12
13966.43	1	V	7158.069	$6517°_{2\,1/2}-13675_{2\,1/2}$	−33	15518.60	1	V	6442.120	$4203°_{6\,1/2}-10646_{5\,1/2}$	−15
13975.51	4	V	7153.418	$7233°_{5\,1/2}-14387_{4\,1/2}$	−66	15519.71	2	V	6441.659	$7061°_{0\,1/2}-13503_{0\,1/2}$	−10
13984.32	1	V	7148.912	$5969°_{5\,1/2}-13117_{4\,1/2}$	−2	15531.18	2	V	6436.902	$4266°_{3\,1/2}-10703_{4\,1/2}$	−5
13994.84	4	V	7143.538	$987°_{4\,1/2}-8131_{4\,1/2}$	−67	15591.38	2	V	6412.048	$2641°_{3\,1/2}-9053_{3\,1/2}$	−21
14007.17	2	V	7137.249	$6389°_{4\,1/2}-13527_{4\,1/2}$	−47	15640.75	2	V	6391.809	$2382°_{4\,1/2}-8774_{4\,1/2}$	−8
14011.45	2	V	7135.069	$5616_{4\,1/2}-12751°_{5\,1/2}$	26	15674.81	2	V	6377.920	$12326°_{6\,1/2}-18704_{5\,1/2}$	24
14027.57	2	V	7126.870	$8402°_{3\,1/2}-15529_{2\,1/2}$	−37	15684.82	2	V	6373.850	$7878°_{3\,1/2}-14252_{3\,1/2}$	0
14029.72	1	V	7125.778	$6549°_{2\,1/2}-13675_{2\,1/2}$	−35	15713.32	1	V	6362.289	$3363°_{2\,1/2}-9725_{3\,1/2}$	−16
14074.99	3	V	7102.859	$7522°_{5\,1/2}-14625_{5\,1/2}$	−21	15717.64	2	V	6360.540	$4459°_{3\,1/2}-10820_{2\,1/2}$	−73
14098.41	1	V	7091.060	$2634°_{2\,1/2}-9725_{3\,1/2}$	−6	15777.92	2	V	6336.240	$12057°_{2\,1/2}-18393_{3\,1/2}$	20
14117.52	1	V	7081.461	$7746°_{2\,1/2}-14827_{3\,1/2}$	23	15784.75	7	V	6333.498	$2563°_{5\,1/2}-8896_{5\,1/2}$	2
14176.18	5	V	7052.159	$3593°_{4\,1/2}-10646_{5\,1/2}$	−28	15821.72	2	V	6318.699	$3995°_{3\,1/2}-10314_{4\,1/2}$	−2
14195.30	2	V	7042.660	$7233°_{5\,1/2}-14276_{5\,1/2}$	−10	15822.82	2	V	6318.260	$7341_{5\,1/2}-13659°_{4\,1/2}$	−61
14257.86	7	V	7011.758	$0°_{3\,1/2}-7011_{4\,1/2}$	−45	15829.83	6	V	6315.462	$2581°_{4\,1/2}-8896_{5\,1/2}$	−9
14283.79	3	V	6999.030	$8804°_{4\,1/2}-15803_{4\,1/2}$	−55	15845.59	1	V	6309.180	$4511°_{2\,1/2}-10820_{2\,1/2}$	−48
14296.00	1	V	6993.052	$7259°_{3\,1/2}-14252_{3\,1/2}$	−50	15958.40	6	V	6264.581	$3793°_{6\,1/2}-10058_{6\,1/2}$	−10
14386.11	2	V	6949.250	$7878°_{3\,1/2}-14827_{3\,1/2}$	−44	15977.12	6	V	6257.241	$1873°_{3\,1/2}-8131_{4\,1/2}$	−41
14415.09	2	V	6935.279	$4523°_{4\,1/2}-11458_{5\,1/2}$	−40	16050.77	2	V	6228.529	$5513_{5\,1/2}-11742°_{5\,1/2}$	−6
14416.48	3	V	6934.610	$2382°_{4\,1/2}-9316_{3\,1/2}$	−55	16120.75	1	V	6201.491	$10798°_{2\,1/2}-17000_{3\,1/2}$	39
14422.28	1	V	6931.822	$8927°_{5\,1/2}-15859_{4\,1/2}$	−26	16143.32	3	V	6192.821	$2581°_{4\,1/2}-8774_{4\,1/2}$	14
14462.80	1	V	6912.401	$7713°_{4\,1/2}-14625_{5\,1/2}$	−12	16167.05	2	V	6183.731	$11387°_{3\,1/2}-17571_{4\,1/2}$	61
14469.08	1	V	6909.401	$7818°_{1\,1/2}-14727_{1\,1/2}$	8	16176.08	1	V	6180.279	$4523°_{4\,1/2}-10703_{4\,1/2}$	7
14488.50	2	V	6900.140	$1873°_{3\,1/2}-8774_{4\,1/2}$	10	16257.10	2	V	6149.478	$2382°_{4\,1/2}-8531_{3\,1/2}$	47
14512.08	1	V	6888.928	$6638°_{4\,1/2}-13527_{4\,1/2}$	−52	16261.41	1	V	6147.849	$2641°_{3\,1/2}-8789_{2\,1/2}$	28
14556.94	6	V	6867.698	$1410°_{4\,1/2}-8278_{5\,1/2}$	−51	16302.32	1	V	6132.421	$5964°_{3\,1/2}-12097_{3\,1/2}$	41
14589.40	2	V	6852.418	$3793°_{6\,1/2}-10646_{5\,1/2}$	−17	16320.71	2	V	6125.511	$5616_{4\,1/2}-11742°_{5\,1/2}$	5
14633.11	1	V	6831.950	$8131_{4\,1/2}-14963°_{5\,1/2}$	67	16327.32	4	V	6123.031	$4523°_{4\,1/2}-10646_{5\,1/2}$	−5
14641.62	3	V	6827.979	$6389°_{4\,1/2}-13217_{3\,1/2}$	−54	16350.45	1	V	6114.369	$6913°_{6\,1/2}-13027_{6\,1/2}$	3
14654.65	1	V	6821.908	$9723°_{4\,1/2}-16545_{5\,1/2}$	−25	16376.48	7	V	6104.651	$987°_{4\,1/2}-7092_{5\,1/2}$	−2
14790.45	2	V	6759.272	$4165_{4\,1/2}-10924°_{4\,1/2}$	−53	16432.88	2	V	6083.699	$5675°_{4\,1/2}-11759_{5\,1/2}$	−4

TABLE 4. *Spectral lines of* Ce II—Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
16456.11	1	V	6075.111	$10924°_{4\,1/2}-17000_{3\,1/2}$	−19	18040.83	1	V	5541.469	$9198°_{3\,1/2}-14739_{2\,1/2}$	34
16478.46	1	V	6066.871	$6389°_{4\,1/2}-12456_{3\,1/2}$	67	18159.65	3	V	5505.211	$7522°_{5\,1/2}-13027_{6\,1/2}$	75
16500.30	1	V	6058.841	$7059°_{4\,1/2}-13117_{4\,1/2}$	−8	18160.02	3	V	5505.098	$7522°_{5\,1/2}-13027_{6\,1/2}$	−37
16530.48	1	V	6047.779	$4266°_{3\,1/2}-10314_{4\,1/2}$	14	18211.22	6	V	5489.621	$2641°_{3\,1/2}-8131_{4\,1/2}$	−36
16595.18	7	V	6024.200	$987°_{4\,1/2}-7011_{4\,1/2}$	7	18224.01	2	V	5485.768	$5969°_{5\,1/2}-11454_{6\,1/2}$	74
16614.87	3	V	6017.061	$2879°_{5\,1/2}-8896_{5\,1/2}$	27	18269.50	1	V	5472.109	$8804°_{4\,1/2}-14276_{5\,1/2}$	35
16705.41	1	V	5984.450	$8402°_{3\,1/2}-14387_{4\,1/2}$	6	18424.85	1	V	5425.971	$3363°_{2\,1/2}-8789_{2\,1/2}$	18
16722.51	7	V	5978.330	$3793°_{6\,1/2}-9771_{7\,1/2}$	8	18577.80	3	V	5381.299	$8278_{5\,1/2}-13659°_{4\,1/2}$	24
16729.42	2	V	5975.861	$4844°_{1\,1/2}-10820_{2\,1/2}$	19	18597.91	1	V	5375.480	$15565°_{2\,1/2}-20940_{3\,1/2}$	61
16742.25	2	V	5971.282	$8280°_{2\,1/2}-14252_{3\,1/2}$	50	18686.35	1	V	5350.039	$3703°_{3\,1/2}-9053_{3\,1/2}$	4
16792.26	3	V	5953.498	$3363°_{2\,1/2}-9316_{3\,1/2}$	13	18700.15	2	V	5346.091	$10088°_{1\,1/2}-15434_{2\,1/2}$	32
16829.29	1	V	5940.399	$5819°_{4\,1/2}-11759_{5\,1/2}$	45	18786.85	1	V	5321.419	$3995°_{3\,1/2}-9316_{3\,1/2}$	−32
16832.86	2	V	5939.139	$6517°_{2\,1/2}-12456_{3\,1/2}$	12	18811.42	2	V	5314.469	$2140°_{0\,1/2}-7454_{1\,1/2}$	10
16856.78	2	V	5930.711	$1410°_{4\,1/2}-7341_{5\,1/2}$	8	18833.85	2	V	5308.139	$5616_{4\,1/2}-10924°_{4\,1/2}$	2
16956.54	2	V	5895.819	$2382°_{4\,1/2}-8278_{5\,1/2}$	11	18852.49	3	V	5302.891	$3593°_{4\,1/2}-8896_{5\,1/2}$	44
16989.71	2	V	5884.308	$7233°_{5\,1/2}-13117_{4\,1/2}$	13	18899.22	1	V	5289.779	$7722_{2\,1/2}-13012°_{2\,1/2}$	−30
17058.88	7	V	5860.449	$2563°_{5\,1/2}-8423_{6\,1/2}$	10	18980.24	2	V	5267.199	$8169°_{1\,1/2}-13436_{2\,1/2}$	39
17076.97	4	V	5854.241	$4203°_{6\,1/2}-10058_{6\,1/2}$	−50	19172.06	3	V	5214.500	$4511°_{2\,1/2}-9725_{3\,1/2}$	24
				$4459°_{3\,1/2}-10314_{4\,1/2}$	−48	19343.44	2	V	5168.300	$3363°_{2\,1/2}-8531_{3\,1/2}$	49
17077.47	5	V	5854.069	$5455°_{7\,1/2}-11309_{7\,1/2}$	−57	19355.99	1	V	5164.949	$9316_{3\,1/2}-14481°_{2\,1/2}$	−68
17080.74	3	V	5852.949	$2595°_{1\,1/2}-8448_{2\,1/2}$	−47	19422.25	6	V	5147.329	$4910°_{5\,1/2}-10058_{6\,1/2}$	66
17094.20	1	V	5848.340	$1873°_{3\,1/2}-7722_{2\,1/2}$	−10	19457.89	4	V	5137.901	$1873°_{3\,1/2}-7011_{4\,1/2}$	31
17103.03	2	V	5845.321	$10314_{4\,1/2}-16159°_{3\,1/2}$	−52	19521.15	5	V	5121.251	$6638°_{4\,1/2}-11759_{5\,1/2}$	42
17168.32	2	V	5823.091	$14097_{3\,1/2}-19920°_{3\,1/2}$	−32	19586.36	1	V	5104.200	$5716°_{3\,1/2}-10820_{2\,1/2}$	−69
17175.23	3	V	5820.748	$14963°_{5\,1/2}-20783_{5\,1/2}$	59	19590.51	3	V	5103.119	$3793°_{6\,1/2}-8896_{5\,1/2}$	24
17187.16	3	V	5816.708	$8280°_{2\,1/2}-14097_{3\,1/2}$	−34	19631.94	2	V	5092.350	$8175°_{2\,1/2}-13268_{2\,1/2}$	−4
17194.10	3	V	5814.360	$10454°_{1\,1/2}-16268_{1\,1/2}$	−40	19650.11	2	V	5087.641	$2634°_{2\,1/2}-7722_{2\,1/2}$	22
17215.89	2	V	5807.001	$5651°_{5\,1/2}-11458_{5\,1/2}$	5	19652.51	2	V	5087.020	$8169°_{1\,1/2}-13256_{1\,1/2}$	17
17226.60	4	V	5803.391	$5651°_{5\,1/2}-11454_{6\,1/2}$	47	19657.53	1	V	5085.721	$3703°_{3\,1/2}-8789_{2\,1/2}$	−64
17254.10	1	V	5794.141	$7233°_{5\,1/2}-13027_{6\,1/2}$	10	19676.37	1	V	5080.851	$8175°_{2\,1/2}-13256_{1\,1/2}$	13
17265.25	3	V	5790.399	$5969°_{5\,1/2}-11759_{5\,1/2}$	−60	19724.55	3	V	5068.440	$6389°_{4\,1/2}-11458_{5\,1/2}$	29
17288.45	3	V	5782.629	$5675°_{4\,1/2}-11458_{5\,1/2}$	39	19730.78	1	V	5066.840	$11387°_{3\,1/2}-16454_{2\,1/2}$	16
17399.11	1	V	5745.851	$9771_{7\,1/2}-15517°_{6\,1/2}$	35	19794.42	4	V	5050.550	$4266°_{3\,1/2}-9316_{3\,1/2}$	35
17493.56	2	V	5714.828	$2563°_{5\,1/2}-8278_{5\,1/2}$	8	19820.52	1	V	5043.899	$3745°_{1\,1/2}-8789_{2\,1/2}$	−5
17508.54	7	V	5709.939	$5455°_{7\,1/2}-11165_{8\,1/2}$	−11	19858.79	2	V	5034.179	$8402°_{3\,1/2}-13436_{2\,1/2}$	−10
17548.86	6	V	5696.820	$2581°_{4\,1/2}-8278_{5\,1/2}$	23	19864.35	1	V	5032.770	$4165_{4\,1/2}-9198°_{3\,1/2}$	−5
17594.72	6	V	5681.971	$1410°_{4\,1/2}-7092_{5\,1/2}$	10	20041.24	3	V	4988.349	$4737°_{2\,1/2}-9725_{3\,1/2}$	−10
17664.58	2	V	5659.500	$7092_{5\,1/2}-12751°_{5\,1/2}$	−16	20046.18	5	V	4987.120	$5716°_{3\,1/2}-10703_{4\,1/2}$	31
17675.61	2	V	5655.969	$10798°_{2\,1/2}-16454_{2\,1/2}$	−30	20248.09	3	V	4937.390	$7011_{4\,1/2}-11949°_{3\,1/2}$	5
17697.54	1	V	5648.960	$7878°_{3\,1/2}-13527_{4\,1/2}$	49	20292.15	2	V	4926.669	$5942°_{3\,1/2}-10869_{4\,1/2}$	−73
17716.92	1	V	5642.781	$7061°_{0\,1/2}-12704_{1\,1/2}$	−14	20383.13	2	V	4904.679	$5964°_{3\,1/2}-10869_{4\,1/2}$	34
17766.10	1	V	5627.160	$10641°_{2\,1/2}-16268_{1\,1/2}$	−70	20417.97	1	V	4896.310	$5924°_{1\,1/2}-10820_{2\,1/2}$	28
17799.00	1	V	5616.759	$0°_{3\,1/2}-5616_{4\,1/2}$	20	20499.78	3	V	4876.770	$5437°_{3\,1/2}-10314_{4\,1/2}$	30
17847.42	4	V	5601.521	$1410°_{4\,1/2}-7011_{4\,1/2}$	21	20706.52	2	V	4828.079	$3703°_{3\,1/2}-8531_{3\,1/2}$	−4
17906.92	1	V	5582.909	$8804°_{4\,1/2}-14387_{4\,1/2}$	21	20711.19	1	V	4826.990	$5819°_{4\,1/2}-10646_{5\,1/2}$	33
17917.19	1	V	5579.709	$6517°_{2\,1/2}-12097_{3\,1/2}$	52	20740.75	4	V	4820.111	$6638°_{4\,1/2}-11458_{5\,1/2}$	16
17954.74	6	V	5568.039	$4203°_{6\,1/2}-9771_{7\,1/2}$	17	20742.60	2	V	4819.681	$12751°_{5\,1/2}-17571_{4\,1/2}$	62
18013.26	5	V	5549.950	$2581°_{4\,1/2}-8131_{4\,1/2}$	−9	20814.51	1	V	4803.030	$11742°_{5\,1/2}-16545_{5\,1/2}$	6
18021.70	1	V	5547.351	$6549°_{2\,1/2}-12097_{3\,1/2}$	−16	20854.19	1	V	4793.891	$3995°_{3\,1/2}-8789_{2\,1/2}$	−28
18026.16	2	V	5545.979	$14404°_{7\,1/2}-19950_{6\,1/2}$	39					$4523°_{4\,1/2}-9316_{3\,1/2}$	12

TABLE 4. *Spectral lines of* Ce II – Continued

Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}	Wavelength Å	Intensity	Ref.	Wavenumber cm^{-1}	Classification	O–C 0.001 cm^{-1}
21000.33	1	V	4760.530	$5942°_{3\,1/2}-10703_{4\,1/2}$	23	22073.61	1	V	4529.060	$2563°_{5\,1/2}-7092_{5\,1/2}$	29
21003.69	1	V	4759.769	$2581°_{4\,1/2}-7341_{5\,1/2}$	19	22087.95	1	V	4526.120	$987°_{4\,1/2}-5513_{5\,1/2}$	22
21068.98	1	V	4745.019	$3703°_{3\,1/2}-8448_{2\,1/2}$	−27	22240.43	1	V	4495.089	$5819°_{4\,1/2}-10314_{4\,1/2}$	40
21203.57	2	V	4714.900	$5010°_{2\,1/2}-9725_{3\,1/2}$	37	22293.19	1	V	4484.451	$3793°_{6\,1/2}-8278_{5\,1/2}$	31
21225.31	2	V	4710.071	$2382°_{4\,1/2}-7092_{5\,1/2}$	52						
						22346.56	1	V	4473.741	$8278_{5\,1/2}-12751°_{5\,1/2}$	13
21268.98	3	V	4700.400	$7059°_{4\,1/2}-11759_{5\,1/2}$	5	22356.91	1	V	4471.670	$11387°_{3\,1/2}-15859_{4\,1/2}$	38
21303.52	1	V	4692.779	$4203°_{6\,1/2}-8896_{5\,1/2}$	−15	22404.16	1	V	4462.239	$9053_{3\,1/2}-13515°_{3\,1/2}$	15
21435.94	1	V	4663.789	$9723°_{4\,1/2}-14387_{4\,1/2}$	13	22408.57	1	V	4461.361	$2879°_{5\,1/2}-7341_{5\,1/2}$	49
21440.35	1	V	4662.830	$5651°_{5\,1/2}-10314_{4\,1/2}$	25	22714.41	2	V	4401.290	$7341_{5\,1/2}-11742°_{5\,1/2}$	52
21553.09	2	V	4638.440	$5675°_{4\,1/2}-10314_{4\,1/2}$	41						
						22724.58	2	V	4399.321	$7059°_{4\,1/2}-11458_{5\,1/2}$	40
21592.15	2	V	4630.049	$3793°_{6\,1/2}-8423_{6\,1/2}$	11	22738.54	2	V	4396.620	$6913°_{6\,1/2}-11309_{7\,1/2}$	40
21594.43	2	V	4629.560	$2382°_{4\,1/2}-7011_{4\,1/2}$	2	22846.10	1	V	4375.920	$7011_{4\,1/2}-11387°_{3\,1/2}$	−6
21596.30	2	V	4629.159	$987°_{4\,1/2}-5616_{4\,1/2}$	31	22869.62	2	V	4371.420	$5942°_{3\,1/2}-10314_{4\,1/2}$	56
21700.46	1	V	4606.940	$5118°_{2\,1/2}-9725_{3\,1/2}$	13	23216.64	2	V	4306.080	$5010°_{2\,1/2}-9316_{3\,1/2}$	38
21706.40	1	V	4605.679	$9053_{3\,1/2}-13659°_{4\,1/2}$	−20						
						23541.05	2	V	4246.740	$4201°_{1\,1/2}-8448_{2\,1/2}$	−7
21721.91	1	V	4602.391	$5455°_{7\,1/2}-10058_{6\,1/2}$	10	23663.36	2	V	4224.790	$7233°_{5\,1/2}-11458_{5\,1/2}$	64
21742.70	1	V	4597.990	$5716°_{3\,1/2}-10314_{4\,1/2}$	44	23766.36	1	V	4206.480	$1410°_{4\,1/2}-5616_{4\,1/2}$	45
21781.54	1	V	4589.791	$10035°_{5\,1/2}-14625_{5\,1/2}$	0	23999.65	2	V	4165.591	$0°_{3\,1/2}-4165_{4\,1/2}$	41
21830.20	1	V	4579.560	$4737°_{2\,1/2}-9316_{3\,1/2}$	21	24172.58	1	V	4135.790	$3995°_{3\,1/2}-8131_{4\,1/2}$	33
21996.05	1	V	4545.030	$6913°_{6\,1/2}-11458_{5\,1/2}$	69						
						24210.41	1	V	4125.919	$4322°_{2\,1/2}-8448_{2\,1/2}$	−13
22033.43	2	V	4537.320	$3593°_{4\,1/2}-8131_{4\,1/2}$	−14						

The origin of the wavelengths is indicated in the third column by the symbols from table 1. The list of Verges et al. is indicated by the symbol V. The wave numbers (in cm^{-1}) appear in column 4 with 3 decimal places. The value of the lower energy level and its J-value appear in column 5 and similar data for the upper energy level in column 6. The odd levels are distinguished from the evens by a superscript degree symbol. The difference between the observed wave number of the line and its value calculated from the two energy levels (O − C) appears in the last column in units of 0.001 cm^{-1}.

The average absolute value of O − C for 100 lines at each of 6 wavelengths is shown below (in cm^{-1}).

Wavelength	Av. O − C
3000	0.037
3500	.021
4000	.019
4500	.019
6000	.017
9000	.022

The general precision of the wavelengths between 2600 and 11 000 Å was determined by measuring the precision of repeating differences between 3 pairs of low odd levels. The average deviation of 156 differences from the means was 0.019 cm^{-1}. Therefore the average deviation for a single wave number is 0.014 cm^{-1}.

Further extension of this analysis will require new observations. To find the missing levels of small J-value will require observation of fainter lines with better precision within the present range of wavelengths. To find missing configurations that lie above 50 000 cm^{-1} will require observations with sliding sparks or ring discharges for excitation and new observations below 2500 Å.

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